

**DOES SELF-THEORIES RESEARCH APPLY TO PUPILS WITH SPEECH,  
LANGUAGE AND COMMUNICATION DIFFICULTIES?**

**AN EXPLORATORY CASE STUDY**

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**D.Ed.Psy.**

## **DECLARATION**

I certify that all material in this thesis which is not my own work has been identified. No material is included which has been submitted for any other award or qualification.

**For Ken and Mena**

## **ACKNOWLEDGEMENTS**

The process of undertaking and writing this thesis has been a major personal and professional endeavour. Had I realised the enormity of the task, I may well have made different choices and taken up knitting. I'd have half a pullover finished by now. However, completing this work has given me experiences which have fundamentally challenged me and changed my thinking and understanding and so I am grateful to have been on this journey and to have survived!

Firstly I would like to thank the pupils who worked with me to make this research possible whose views I tried so hard to vividly capture. I value your honesty, humour and your trust very much ~ thank you.

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## 'THE LIBERATION'



“On the uniformly grey surface of the strip of paper that is being unrolled, a simultaneous development in form and contrast is taking place. Triangles, at first scarcely visible, change into more complicated figures, whilst the colour contrast between them increases. In the middle they are transformed into white and black birds, and from there fly off into the world as independent creatures. And so the strip of paper on which they were drawn disappears.”

(Escher, 2001; pg. 9)

Based on a participant's comment, throughout this thesis I use Escher's 'The Liberation' as a metaphor; a visual representation of the pupils' journey through the process of this research project. The pupils begin, like the triangles on the paper, initially presented as similar and fixed by the possible beliefs that they have of themselves and that others may hold of them, their (dis)abilities and their possibly limited ability to learn.

As the research is described and the findings explored, each individual is revealed and a richer, deeper understanding of each pupil is developed. Individual perceptions are explored within a research process that reveals my own subjective understanding of a shared objective reality.

As the thesis progresses, the individuals emerge as distinct and separate. Until finally the birds fly away representing the pupils' as learners, freed with all the personal potential and possibilities their freedom affords them.

## **ABSTRACT**

This thesis explores the applicability of self-theories research beyond the existing mainstream research contexts. Self-theories research investigates individuals' perceptions of the nature of intelligence – whether it is considered fixed and innate (entity beliefs) or malleable, something that can be manipulated through behaviour (incremental beliefs). Dweck & Leggett (1988) suggest that the self-theories that each individual hold can affect their learning behaviours and subsequent academic achievement. Although there is general support for this research base, no information appears to exist about whether these findings also apply to individuals with 'special' needs.

This case study explores the learning, intelligence and ability beliefs of a group of five pupils, aged 15 or 16, educated at Peachtree School, a non-maintained special school. These pupils are believed to have speech, language and communication (SLC) difficulties. Dweck's research methods were adapted in consultation with staff for use with these pupils. An intervention was developed and shared which introduced key ideas about self-theories of intelligence to the pupils. This intervention included lessons, daily learning logs produced by the pupils and video recorded lessons. Perceptions of intelligence, ability and learning were captured from both pupils and staff using semi-structured interviews before and after this intervention.

From a critical realist stance, the thesis also explores how to include pupils with SLC difficulties in the research process and how to help enable these pupils to share their perceptions. Findings are analysed using thematic analysis. In an attempt to share the perspectives and understandings of all participants, findings are presented at both an individual pupil and a collective level, which also includes two members of involved staff.

Findings suggest that self-theories research may apply to pupils with SLC difficulties, based on this case study with some possible limitations which are discussed. Further research is suggested to consider the applicability of self-theories research beyond the context of this study. Implications for professionals working with children deemed to have special educational needs are explored. The quality of this research and the suitability of the chosen methods are also critically considered and discussed.

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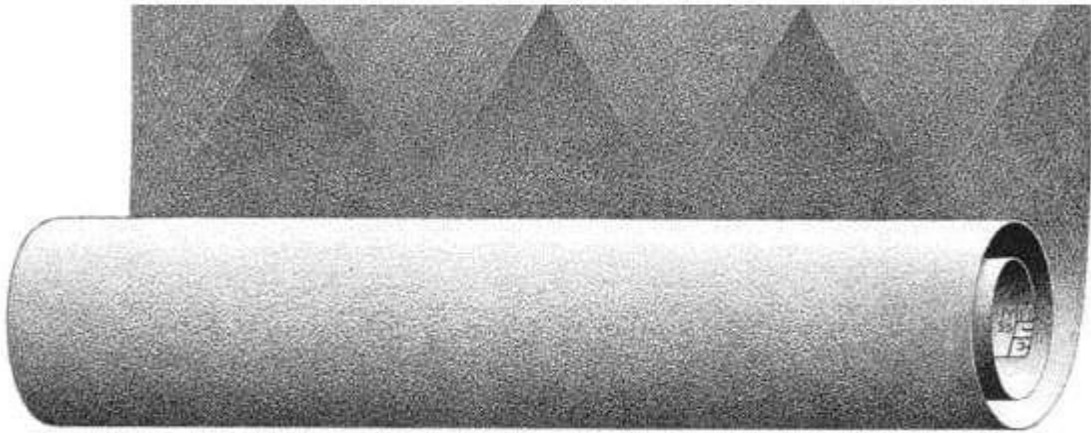
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# **CHAPTER 1: INTRODUCTION**



*“On the uniformly grey surface... a simultaneous development in form and contrast is taking place.”*

## **1.0 Introduction**

The research I describe in this thesis had one main purpose: to explore whether self-theories research is applicable to a ‘special’ pupil population; namely pupils in Key Stage 4 (KS4) at Peachtree School, who have been labelled as having speech, language and communication (SLC) difficulties. Specifically, I wanted to consider the ability, learning and intelligence beliefs of these pupils before and after implementing an intervention based on the self-theories research base of Carol Dweck (for example, Dweck, 1999). Alongside this purpose was my belief that these pupils had something of value to say; therefore, part of this exploratory study sought ways of enabling these pupils to be able to engage in and respond to the research.

In June 2010, I attended a lecture given by Carol Dweck. In discussion with Professor Dweck, she indicated that she had not considered or researched the application of these theories to pupils with special educational needs (SEN), but was interested to

know if similar results to her own might be possible. She believed that her research held relevance and potential significance, both for these pupils and for the adults working with them. She added that it seemed possibly more important for these children to develop a 'growth' mindset, where learning, achievement and progress are perceived as possible. It seemed probable to her that children with labels related to SEN may learn to define themselves by their label(s), and their understanding of their disability or difficulties may limit their aspirations and beliefs about their personal potential.

Dweck, along with various colleagues (e.g. Dweck and Bempechat, 1983; Dweck and Elliott, 1983), has explored and established the power of self-theories to influence the way students approach and undertake tasks and, as a result, learn. In this thesis, I concentrate on one aspect of Dweck's work, namely the difference between entity and incremental beliefs regarding the nature of intelligence, although Dweck's work has been explored more widely; for example, Kamins and Dweck, (1999) (contingent self-worth and coping); Chiu, Dweck, Tong and Fu, (1997) (implicit theories and conceptions of morality).

Dweck (1999) suggests that there are two possible self-theories about intelligence: an entity or an incremental belief. Individuals hold an entity theory if they view their intelligence as fixed; an innate trait, which cannot be changed. An alternative view is held by individuals with an incremental view; they consider intelligence to be controllable and able to change. Dweck with various co-researchers has shown, largely via self-report questionnaires, that students have self-theories of intelligence that range from strongly fixed to strongly malleable. Dweck also suggests that although these theories may be quite strongly embedded, they can be altered. Much of her research is focussed upon this point.

The importance of self-theories becomes clearer when learning behaviours are considered. Individuals holding entity beliefs are thought to adopt performance goals; they seek to display, and thus confirm, their level of ability and they seek to avoid outcomes that undermine this (such as failing at a task). In contrast, incremental self-theorists are more inclined to adopt learning goals and see the challenges they face as opportunities to learn. For these individuals, lack of success is likely to stimulate further learning, as more or better-focused effort is believed to be required to succeed. Failure is not perceived as being caused by any innate, 'fixed' factors, such as lack of ability or intelligence, but as evidence of a lack of external or controllable factors such as hard work, effort or ineffective teaching.

Individuals with a fixed mindset are believed to be less persistent than those with a malleable disposition. This is why a malleability mindset is deemed preferable. Learners with a malleable mindset are likely to persist in the face of challenges and seek alternative, more effective ways to learn. As a result, they are able to learn more effectively (Dweck, 1999).

It makes intuitive sense to assume that pupils believed to have SEN are perhaps more likely to hold fixed beliefs about their intelligence, as these beliefs could be based upon the perceptions they hold of themselves as individuals with 'special needs'. The fact that they have been identified as having some level of difficulty, impairment or disability suggests that this process of identification may have helped pupils construct self-beliefs. If their 'special needs' are perceived by pupils, and by others, as permanent and fixed, then their intelligence could also be perceived in this way. Furthermore, if these beliefs also affect learning behaviours, as Dweck's research suggests, then pupils may be less effective learners, due to the limiting fixed beliefs they hold of their intelligence.

## **1.1 My Professional Role**

This research was based on, and integrated within, my everyday work as an Educational Psychologist (EP) and Deputy Head teacher at Peachtree School (a non-maintained special school for pupils with cerebral palsy (CP) and/or SLC difficulties). My professional role is wide ranging but includes working as an EP supporting pupils who appear to lack self-confidence and present with a fear of failure which impedes their engagement in learning opportunities. My choice of research focus was directly influenced by my professional experience and consideration of the Department for Education (DfE) statement in the Green Paper published in May 2011 that “currently, life chances for the approximately two million children and young people in England who are identified as having a special educational need (SEN), or who are disabled, are disproportionately poor.” (pg. 4) I work alongside pupils with SEN every day, providing assistance to enable their engagement in learning opportunities, with the intention of supporting them to maximise their “life chances”. If self-theories research interventions had worked as well as Dweck and colleagues described in mainstream schools and colleges, I wondered if a suitably tailored intervention could be successfully used with the pupils I work with daily.

My research was supported by my leadership role in school, which allowed me the freedom and scope to develop this project. This work also allowed me to involve my colleagues in the planning and research process, and engage collaboratively with colleagues and pupils over a prolonged period of time. Throughout this thesis, I have attempted to demonstrate how my research arose from my professional practice, the tensions and opportunities this afforded and how this research has influenced practice within my school.

In this study, I have attempted to present the perspectives of all pupil participants and involve them in a process that may support them to develop their own learning. I wanted the pupils to take a key part in this research with their perceptions, thoughts and opinions clearly represented, as Burden (1996) states, “(in) a form of empowerment rather than enslavement” (pg. 106).

My research stems from my professional experience focused by my conversation with Professor Dweck. It was conceived as an initial, tentative step towards supporting pupils to develop their understanding of intelligence and learning, with the purpose of supporting them to develop more effective learning behaviours and potentially become more effective learners. The exploratory case study described in this thesis involves the development of a tailored classroom intervention designed to support the development of ‘growth’ mindsets in the pupils I work with.

## **1.2 The Participants**

The pupils in this study all attend Peachtree School and have Statements of SEN which detail difficulties in the area of SLC (see Appendix 1 for ‘pen portraits’ of the pupil participants). These pupils were selected as an appropriate group of children to engage in the research process as their described difficulties may have affected their beliefs of intelligence and learning in a number of ways; for example, failure earlier in their lives necessitating special schooling, or the struggle to understand spoken language leading to pupils ‘tuning out’ the language used in lessons (Brinton and Fujiki, 2005). I have found no literature on the application of self-theories research to a population of pupils with SLC difficulties. In order to mirror aspects of Dweck’s research, some of which was originally carried out in American junior high and high schools (e.g. Henderson and Dweck, 1990), I chose six KS4 pupils from the same

class, aged fifteen or sixteen years, for my research; one pupil missed too many sessions due to ill health to be included in my findings. However, unlike Dweck's work, my participants had been assessed as having SLC difficulties and were being educated in a specialist setting.

Vygotsky (1986) suggests that language plays a vital role in cognitive development; it is the main way that information is transmitted to children, either aurally or later in written form. Language is also the dominant tool of intellectual development. Vygotsky (1986) also posits that language develops through social interactions and, over time, language ability becomes internalized as thought and 'inner speech'. Therefore, thought can be viewed as mediated by language. Where SLC difficulties exist, pupils may be considered at a disadvantage in terms of their intellectual development.

In my experience, as both a teacher and EP, speech and language ability appears to be pivotal to pupils' educational success or failure. Lindsay and Dockrell (2000) consider the development of language competency as "arguably the cornerstone for a child's ability to access the curriculum and develop their social competence." (pg. 584) The Berrow Report (2008) agrees, stating that "speech, language and communication are crucial to every child's ability to access and get the most out of education and life." In particular, language skills underpin the development of literacy skills. As Rose (2005a) states, "speaking and listening, together with reading and writing, are prime communication skills that are central to children's intellectual, social and emotional development." (pg. 3) Unlike other areas of academic skills, language is cross-curricular and is fundamental to many aspects of daily living. Therefore, pupils who experience SLC difficulties are possibly likely to experience associated literacy deficits impacting upon school success across the curriculum, and difficulties in social settings.

It should not, however, be assumed that pupils' SLC difficulties are the same; the pupils in this study present with varying difficulties, both by type and severity, as well as differing personal histories and experiences of school. Research tends to overlook or disregard the exact nature of children's SLC difficulties in the analysis of results, seemingly treating this as irrelevant by assuming all SLC difficulties impact children in the same way (e.g. Lindsay and Dockrell, 2000). However, the precise nature of each child's difficulty is worthy of consideration when considering if the measures employed are appropriate. For example, if a child's language difficulty is expressive, they may understand the questions asked of them but struggle to answer. However, children with receptive language difficulties may not understand the questions asked and may respond in the way they feel is most likely to be correct, based on the information they do understand or other clues, such as the non-verbal signals of the questioner. Similarly children with semantic pragmatic difficulties may not fully understand the questions asked in the same terms as the researcher intended, possibly interpreting questions in a superficial or very literal way (for example, Bishop and Norbury, 2002). For research to be valid, participants need to understand the researcher's terms as they are intended. If this is not the case, the level of confidence that researchers can have regarding their findings is affected.

The severity of the SLC difficulty is another issue to be considered. Although placed in the same school, these children may experience different levels of difficulty. Pupils attend Peachtree School for a number of reasons, not all of which may be connected to their SLC difficulties. Historically, these reasons have included a lack of available school places within their Local Authority's (LA's) schools or the pupils are considered to have such complex difficulties and/or additional needs that these needs are deemed to be inadequately met elsewhere.



In addition to the differences in levels of difficulty, pupils are likely to have had different experiences in mainstream school prior to placement at Peachtree School. “It is important to recognise that children and young people” with SLC difficulties “frequently go undetected because their disability is often hidden and they are at risk of misdiagnosis, for example as having behavioural, emotional and social difficulties.” (The Berrow Report, 2008; pg. 47) As SLC difficulties are not generally visually apparent, problems tend to be noticed later than other disabilities. Consequently, pupils presenting with SLC difficulties, significant enough to necessitate special school provision, are likely to have experienced ‘failure’ in school(s), possibly several times. This may include failing to achieve and/or cope with the pace, delivery or curriculum content of lessons. Most pupils are likely to have started their school career within a mainstream classroom and, only as problems became apparent, gone on to receive additional support, normally in incremental stages with failure at each stage necessitating the next. A statement of SEN may have been the final resort and specialist schooling only considered when other provisions could not offer, or were not believed to be able to offer, ‘adequate’ provision. Experiences of school prior to attending Peachtree School may have been challenging and stressful for both the pupils and their families. Deficit in any area of SLC, with the academic, social and possibly behavioural difficulties that may have followed, could have adversely affected pupils’ self-concept and the beliefs they hold regarding themselves and their abilities, including their intelligence and ability to learn.

Finally, when I discuss pupils with SLC difficulties in this thesis, I am not adopting an essentialist view of SLC difficulties. My use of this term should be understood as acknowledging that the pupils in this study have been assessed by various professionals as having met criteria for a diagnosis of SLC difficulties to be given.

### **1.3 Why is this Research Important?**

Much of the impetus for research on pupils' self-beliefs has been the conviction that these beliefs may be influential, and possibly detrimental, to academic success (Chiu, Hong and Dweck, 1994; Jerome, Fijiki, Brinton and James, 2002). There are many hypotheses regarding the negative effect of lowered self-concept and unhelpful beliefs about the nature of knowledge and learning. With attention focussed upon school accountability for the progress and achievement of pupils, (e.g. Ofsted 2012) the search for underlying factors that may account for varying performance is clearly very important.

In this thesis I consider self-concept, a general term referring to how individuals perceive themselves, to be the basis of other self-beliefs. Many researchers, using a variety of self-report measures, report a relationship between pupils' academic performance and their self-concept (Harter, Whitesell and Junkin, 1998; Kloomok and Cosden, 1994; Tabassam and Granger, 2002). However, the literature concerning the effect of academic achievement and ability on pupils' self-concept appears conflicting and inconclusive. Studies have tended to use self-report measures and there may have been difficulties for some pupils in accessing these successfully, or perceiving the terms in the way the researchers intended. This may have contributed to the lack of consistency in findings.

Self-concept is possibly related in some degree to pupils' beliefs about themselves and their abilities, but it can be argued that this is difficult, if not impossible, to accurately quantify. An individual's self-concept is linked to their perceptions and understanding of their past experiences and, perhaps, how they perceive that others view them and their abilities. To explore these perceptions, qualitative research methods may prove more useful (Gilham, 2000). Qualitative research strives for in-

depth (Bryman and Bell, 2003), holistic understanding of a phenomenon, from different perspectives, bounded by the context in which it is studied (Long and Godfrey, 2004). This leads to acknowledging a further key difference between my research and the work of Dweck and colleagues. I make use of a range of qualitative techniques and do not assume that data derived from self-reports and questionnaires can help me answer the questions I wish to ask.

Information regarding how pupils conceive learning and, more specifically, what they believe about their ability to learn, may provide useful information when considering effective practice with pupils with SLC difficulties. Researchers hold that pupils' beliefs about their ability to learn may be directly related to their achievement in school (DeJong and Ferguson–Hessler, 1996). At a time when the structure of the educational system is under scrutiny, and teachers are held accountable for their pupils' performance, it appears important for educators to consider as many aspects of the pupil and learning as possible to facilitate learning and achievement. Although pupil performance is generally measured in quantitative terms, via grades and levels, researchers and educators may be better advised to see beyond this convention, and make a paradigm shift from quantitative to qualitative based information when evaluating best practice for instruction and intervention. Measurement can assist the process of decision making; however, without knowledge of how individuals learn and how to successfully address any difficulties, arguably learning cannot be maximised. For the pupils I work with, teaching approaches designed to help them learn more effectively should be explored. Any identified approaches could be included as part of pupils' everyday educational experience. By exploring the applicability of self-theories research to pupils with SLC difficulties, my research aims to be one small step towards this.

## **1.4 Researcher's Stance**

In this section I introduce my philosophical position which leads to consideration of my stance as a researcher.

### **1.4.1 Philosophical Stance**

The philosophic paradigm that best describes my ontological and epistemological position is critical realism. This paradigm embraces objective ontology and subjective epistemology (Johnson and Duberley, 2000). Here objective ontology refers to reality, which I consider exists whether I am consciously aware of it or not. Subjective epistemology implies that I can only come to know this reality through my perceptions of it and through attempting to discover and interpret the perceptions of others. Critical realism supports the idea that an understanding of reality is indivisible from each individual's understandings and beliefs, but that this understanding does not determine reality. In my research, I seek to understand the perceptions of the pupils, and I also include the responses of involved staff in Chapter 5, but I present my understanding with the acceptance that there are alternative interpretations. Each individual has their own unique perspective of the world and I, as researcher, may only interpret their interpretations. This is regarded as a double hermeneutic and critical reflexivity will be important in considering how my perceptions and interpretations affect the research process and my findings, especially given my dual role in Peachtree School.

### **1.4.2 Insider Epistemology**

An important question for those who study the experiences of others relates to 'insider epistemology', the central principle is that "*insiders have a privileged access to knowledge of their own experiences*" (Tangen, 2008, pg. 159, italics in original).

Rooted in feminist research and the disability movement, in its strongest form the contention of insider epistemology is that those who have not lived an experience cannot understand it: “only insiders can understand their experiences and thus only insiders can develop valid knowledge of the insider group” (Tangen, 2008, pg. 160). In relation to the experiences of individuals believed to have disabilities, it has been suggested that “if disabled people left it to others to write about disability, we would inevitably end up with inaccurate and distorted accounts of our experiences” (Oliver, 1996, pg. 9). In the strongest version of epistemology, to ‘know’ means to ‘have the same experience as’, and this position would jeopardise any attempt I make, as an ‘outsider’, to write about the beliefs of pupils at Peachtree School. As I am not a pupil believed to have SLC difficulties, I must attempt to interpret and represent the views of ‘others’ whose experience I cannot share. However, if I aim to develop theoretical knowledge, then ‘to know’ is better understood as being “able to describe, explain or make sense of experiences” (Fay, 1996; pg. 27). Adopting this weaker version of insider epistemology allows me to describe and make tentative interpretations of the experiences and views of others. In addition, I am an ‘insider’ in terms of the context of the school and, therefore, I am perhaps in a more privileged position to attempt to do this. However, I accept that my ‘insider’ knowledge and experience may mean that I interpret findings more subjectively as I may only present my understanding of the participants’ understandings: a double hermeneutic.

#### **1.4.3 Research with Children**

I consider that there are several good reasons to involve children in the process of research (Kirby, Lanyon, Kronin and Sinclair, 2003): for example, considering the research to be better, more meaningful or having greater validity by seeking and reporting children’s opinions and experiences. My belief that researchers have much

to learn about children and children's experiences from the children themselves, assumes that children "both construct their worlds and are constructed by their worlds" (Kincheloe, 2004: xii), as they engage in their everyday lives. Greig, Taylor and MacKay argue that children's lived experience differs to adults and state "acknowledging that children's worlds are different is a sound starting point." (2007, pg.183)

Differences between children and adults possibly include a more limited understanding of words, different vocabulary, less experience of the world and a shorter attention span (Boyden and Ennew, 1997). Therefore, including children in research implies the creation of an inclusive context to collect data and suggests the use of techniques suitable for researching with children (Thomas and O'Kane, 1998). Following careful consideration, I planned a range of enabling, inclusive contexts using the following techniques:

- three lesson videos to record participant observations (video evidence),
- daily pupil diaries (written evidence),
- two semi-structured interviews with individual staff and pupils - one before and one after the intervention (recorded evidence).

## **1.5 The Design**

My research consisted of a range of qualitative strategies allowing me to gather data over a six week period, using an exploratory case-study approach. I chose this approach as I wished to capture the complexity of a specific case bounded by a particular time and context, and to explore a research base which has yet to be applied to a population believed to have SEN of any type.

Case studies allow detailed contextual analysis of a limited number of events or conditions, and their relationships (Yin, 2003). They are widely used for explorations in social science and when considering educational issues, (Gulsecen and Kubat, 2006).

As Herling, Weinberger and Harris (2000) note, the concepts of a case, case study and case study research are often used interchangeably. In this study, case study research is defined as:

“scholarly inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” (Yin, 2003; pg. 33).

Here the “phenomenon and context are not clearly evident” in the sense that the pupils’ lived experiences are complex, varied and dynamic. The context of my research is Peachtree School, but I cannot assume that interactions and experiences elsewhere during the time the intervention took place have no relevance to my research; on the contrary, there may be numerous influences that I remain unaware of.

Researchers successfully employ the case study research method in well planned studies of real-life situations, issues and problems (Braun and Clarke, 2006). I placed particular emphasis on the participants taking part in the process because I wanted to understand, as fully as possible, their beliefs and understandings of the concepts and processes involved. Through making use of a range of interactive data gathering opportunities, I planned to capture a rich description of the participants’ views.

The aim of my research was to explore Dweck’s research and to investigate how this might be applied to pupils described as having SLC difficulties. To do this, pupils would need experiences designed to develop their understanding of learning and the

flexible nature of academic ability and intelligence. In order to meet these aims I decided that I needed to:

- work in a familiar and authentic setting.

This was to ensure that pupils were not affected by an artificial setting and were able to express their views without concern about an unfamiliar environment.

I also wanted to ensure that the intervention was rooted in daily school experience in order for it to become as routine, natural and 'normal' as possible, thus, making it more likely to continue after the initial research phase, if it proved useful.

- work directly with pupils and staff.

This included planning the intervention with staff, and working and speaking directly with pupils both formally and informally.

- seek the views of pupils and staff directly.

I wanted to seek their opinions and thoughts without the further interpretations, assumptions or understandings of others, in order to get closer to the participants' understanding of their own lived 'reality'.

- provide experiences and learning opportunities that were useful or helpful to the pupils.

The purpose of my research was not only about asking questions and seeking answers, but also to successfully engage pupils in a process that may help them become more productive and effective learners.

- focus on an intervention that may have an impact on the participants but, also, other pupils in Peachtree School in the future.



If the intervention helped the participants become more effective, resilient and/or determined learners, then I hoped that a similar intervention might help other pupils in a similar way.

I planned the intervention after identifying these key points, in collaboration with the participants' class teacher and Speech and Language Therapist (SaLT). The intervention was constructed using ideas from Dweck's 'Brainology' website (<http://www.brainology.us>). An overview of the research process is provided in Chapter 3.

As both EP and Deputy Head teacher in Peachtree School, my involvement with pupils is generally either quite superficial or concerns a specific problem or issue. As I wanted to engage with pupils outside of this role and engage with them as a researcher, I needed to consider the practicalities of the research process and my relationships with all individuals involved. I decided that the intervention should mirror the general teaching approach and routines familiar to the pupils, rather than removing them from their everyday classroom experience. This intervention was planned to take place over a half-term taking into account the educational and therapeutic needs of these pupils and the wider needs of the curriculum and school. Additionally, this allowed for a research process that enabled investigation of everyday learning beliefs and behaviours with minimal disruption to the lives of pupils and teachers. By working alongside staff in classroom based research, teaching and research could be considered as two sides of the same coin. As Rowland (2000) states:

"The ability to inquire, to engage others in one's enquiries and to learn from them are the characteristics of the good teacher, the good researcher and the good student ... teaching, learning and research are not different activities ... "

(Rowland, 2000; pg. 28)

Although the pupils were not involved in designing or planning this research, staff were involved and I attempted to adopt a method and design that enabled all participants (pupils, staff and myself) to become 'co-researchers'. Pupils and staff provided feedback throughout the intervention process and their feedback led to adaptations. My research methods also needed to recognise that, if this research was going to have any chance of a longer-term impact, then changes to the usual organisation of classroom life must be minimal. As Fullan (2002) states:

"Learning in the setting where you work, or learning in context, is the learning with the greatest payoff because it is more specific (literally applied to the situation) and because it is social (thereby developing shared and collective knowledge and commitments)." (Fullan, 2002, pg. 11)

This reflects a socio-cultural psychological perspective, which stresses the role of collaboration in the production and reconstruction of knowledge, skills and understanding. I consider subjective knowledge to develop through each individual's interpretation of these experiences. It also reflects a practitioner research approach which underpinned my research, as I sought to develop my own understanding and that of my colleagues, by carrying out professional enquiry based on the research of Dweck and colleagues. As I have a dual role in school, my professional position is different to the majority of EPs who work within a Local Authority. I acknowledge that my roles, as both EP and Deputy Head teacher, allowed privileged access to the pupils and staff and my stance as a researcher retains elements from both roles. However, I do not consider this to be a weakness. Just as within my everyday work in school, I cannot, and I believe I should not, attempt to separate these roles. As practitioner I make use of my psychological knowledge base in everything I do, and my work is firmly rooted in both educational and psychological theory.

Hart (1995) states that, authentic practitioner research results from practitioners developing questions stemming from their own practice, systematically investigating these questions and interpreting outcomes within the context of their practice. Groundwater-Smith and Mockler (2006) have argued that “the knowledge that drives professional practice and the “theoretical knowledge” valued by the academy are not mutually exclusive” (pg. 107). Both a strength and weakness of practitioner research is that it is responsive to the particularity of its own context, but that does not suggest knowledge gained in this context may not be of interest to others elsewhere. In this research, the school context is complex and unusual, even when compared to other special schools. The pupils, staff and interdisciplinary teaching and therapeutic approach combine to make Peachtree School a unique context. However, I do not consider this to be an obvious weakness to my research; any findings from this, or from any other qualitative research study, may have aspects that have applications elsewhere.

Generalising findings is not the only reason to conduct research. Through the process of researching, the practitioner has opportunities to develop views and understanding in new ways within a familiar setting. This may lead to benefits that were unforeseen when the research was originally conceived. Issues relating to whether outcomes of my research have more general applications will be considered further in Chapter 6. I now consider issues of quality which were carefully considered when designing and carrying out this research.

## **1.6 Quality**

Smith (2003) proposes the need for a different set of constructs for the assessment of quality within qualitative research and this is supported by others, such as Guba and Lincoln (1994). Healy and Perry (2000) state that the quality of a study should be

judged by terms related to the study's paradigms; for example, while the terms 'reliability' and 'validity' are criteria for quality in quantitative studies, when evaluating qualitative research, alternative criteria have been proposed such as trustworthiness and reflexivity (Merrick, 1999).

Lincoln and Guba (1985) suggest the following criteria for qualitative research all of which are adapted from quantitative research:

- Credibility (adapted from internal validity): its purpose is to check that the results of qualitative research are credible.
- Transferability (adapted from external validity): the degree to which the results of qualitative research can be generalised or transferred to other contexts or settings.
- Dependability (adapted from reliability): the need for the researcher to account for the ever changing context within which research occurs.
- Confirmability (adapted from objectivity): the degree to which the results can be confirmed or corroborated by others.

Two further criteria, authenticity and morality, were added by Angen (2000). In this study these six concepts underpinned the research process. However, I consider morality to be of key importance because of the potential vulnerability of the pupil participants.

A precise definition of 'the vulnerable' is problematic, as this term is socially constructed (Moore and Miller, 1999). Vulnerability is also a contested notion; some who are considered vulnerable by 'outsiders' may not view themselves in this way (Cameron and Hart, 2007). However, I consider the pupils in this study to be vulnerable, as they are both children and have SLC difficulties (Liamputtong, 2007). Historically, research with vulnerable populations has been ethically challenging, particularly research that stems from the personal agendas of researchers leading

observation of the vulnerable participants from the 'outside', (Flaskerud and Winslow, 1998). The usefulness of research, from the perspective of the participants, depends upon researchers having a commitment to understanding their lived reality, and critically analysing the stereotypes that these participants are subjected to (Bishop, 2005; Smith, 2005). I plan to undertake my research with a commitment to working with and involving participants in order to avoid making assumptions, possibly negating their lived realities.

Russell (1999) asked "should we be 'mining the minds' of ... disempowered people for our own research purposes?" (pg. 404) However, I consider that regarding a group as too vulnerable to participate, disempowers them further by limiting opportunities to include them in experiences which may benefit them in some way (Liamputtong, 2007). It can be argued that the benefits of undertaking research need to be measured against the possible risks; for example, Flaskerud and Winslow (1998) suggest that "findings of studies of vulnerable groups should be directed first toward benefitting the group to be served." (pg. 10) This is difficult to ensure as results cannot be guaranteed, and issues "surrounding sensitive research are not always apparent at the outset of the research" (Dickson-Swift, 2005; pg. 26). I consider this research to be potentially beneficial to the pupils involved; as a result, this research is morally justifiable.

Furthermore, when considering credibility, I suggest that attempting to employ triangulation within this research would be inappropriate. Richardson (1994) questioned triangulation as implying the existence of a 'fixed point' (a single truth or reality) and instead proposed a crystal metaphor with each participant's viewpoint adding an individual facet, their subjective perceptions of the shared reality relevant to the research context. This metaphor sits well with my research stance.

Issues of quality will be critically evaluated in Chapter 6.

### **1.6.1 Reflexivity**

Reflexivity in research involving people is a concept relating to the influence of social context, particularly the influence of the researcher on the researched (Davies, 2008). As qualitative research is largely subjective, reflexivity is crucial in maintaining awareness of how my own subjectivity impacts upon my research within the entire research process. According to Fielding (2004) “the construction of the research subject is... A central problematic in social research” (pg. 297). Researchers in the social sciences and education generally accept that this central problem is not easily resolved (Lewis, 2001; Fielding, 2004). However, researchers seek to minimise these difficulties in a number of ways.

Firstly, the researcher aims to maintain a disciplined, sensitive, aware and reflective stance during research, especially when researching with children. This is to avoid any distortion arising from a failure to ‘decentre’ (Donaldson, 1978); for example, to step outside the researcher’s subjective viewpoint and see the world through the eyes of a child. Although this appears straightforward, this is very difficult to achieve because the imposition of adults’ viewpoints upon children is often understated, unspoken and taken for granted (Davis, 1998; Lewis, 2001; Fielding, 2004). As a result, children are potentially vulnerable to the unequal power relationship between adult researchers and themselves (Alderson and Goodey, 1996; Boyden and Ennew, 1997). Connolly (1998) suggests critical reflexivity is vital to avoid imposing researchers’ views onto children. For researchers, seeking ways of encouraging children to express their views freely (Hill, 1997) without influencing their views remains a challenge.

Pollard (2005) maintains that the habit of reflective thought can be learned by adopting a mindful, active questioning stance towards underlying interpretation. This informs the researcher's understanding of what is happening throughout the entire research process. An important point in my research was developing a conscious awareness of the impact of my behaviour upon the pupils. This suggested the need for careful consideration of my role and whether I am an insider or outsider (Delamont, 1992), and how my position, age and gender may impact on the pupils' responses (Silverman, 2013). However, of particular importance, within the context of this research, is my need for sensitivity in the use of my power and authority, both as an adult and as teacher in charge of the school (Allan, 1999).

I made concerted and conscious efforts to reduce, or at least acknowledge, the disparities in power between the pupils and myself by adhering to these ethical principles and practices:

1. taking time to build trust, ensure anonymity, confidentiality and privacy and gain informed consent from the pupils,
2. providing ongoing opportunities for pupils to opt out of the research by reminding them that this was possible before sessions and interviews,
3. adopting a number of measures to help the pupils build self-confidence including avoiding an expert stance, avoiding deception, emphasising the value of their contributions, discussing their responses with them and asking them how things at school might change as a result of the research,
4. treating the pupils with respect by taking their personal responses seriously including inconsistencies or contradictions,

5. paying attention to the possibility that my language may confuse the pupils or influence their responses, by checking with them my understanding of their responses, in order to validate, amend or disregard findings,
6. clarifying and elaborating my research questions with pupils and their parents whenever necessary,
7. 'triangulating' perceptions, in accordance with the 'crystal' metaphor suggested by Richardson (1994), by exploring how different participants perceived events or behaviours, and by using different techniques to explore perceptions in different ways, whenever this was possible,
8. ensuring that my own perceptions remained as apparent as possible throughout writing-up this research. (Cooper, 1993; Thomas and O'Kane, 1998; Travers, 2001; Silverman, 2013).

I have attempted to keep issues of reflexivity explicit throughout this study. I will return to this again in Chapter 3. In Chapter 6 I will critically consider how successfully I have addressed these concerns.

## **1.7 The Research Questions**

The main purpose of my research is to attempt to answer this question:

*Does self-theory research apply to pupils with SLC difficulties?*

Consequently, I needed to carefully consider how I might begin to explore this. Having made the decision to work with pupils in KS4 described as having SLC difficulties, I needed to consider how to enable these pupils to develop their understanding of learning, the nature of intelligence and themselves as learners. I also needed to consider how I might capture their perceptions in appropriate and accessible ways.



In order to make use of self-theory research, I firstly needed to explore the views pupils hold of learning and intelligence, what they believe learning is, how they know when it occurs and how they perceive intelligence. This led to the first two supplementary research questions:

*How might pupils described as having speech, language and communication difficulties understand 'learning'?*

*How might pupils described as having SLC difficulties perceive 'intelligence'?*

Although it may seem intuitive to suppose a direct relationship between SLC difficulties and poor academic self-concept, consistent supporting empirical evidence has yet to be found (McAndrew, 1999; Lindsay, Dockrell, Letchford and Mackie, 2002). This also assumes that many additional factors, such as parental and peer influences, school and social support cannot and do not compensate. Appreciating that I was assuming that some, probably negative, impact was possible due to the pupils' understanding of their SEN labels; I devised the third supplementary question:

*How might pupils described as having speech, language and communication difficulties perceive their ability as learners?*

One possible outcome of a suitable tailored intervention based on self-theories research is the potential to provoke changes to pupils' self-theories, their beliefs and perceptions regarding intelligence and learning. This leads to the fourth research question:

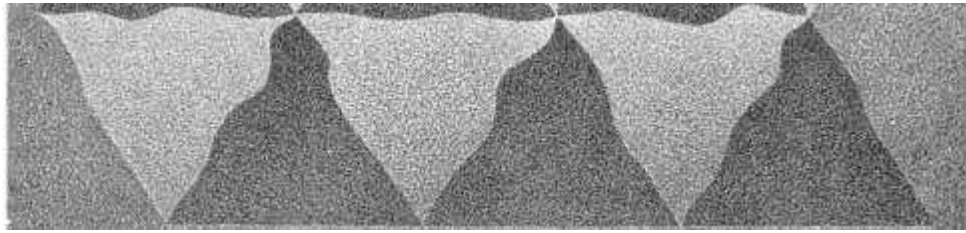
*How might an intervention based on self-theories research affect these pupils' learning and ability beliefs?*

This research is conceived as an initial exploratory investigation into developing an understanding of the applicability or limits of self-theories research with a specific ‘special’ pupil participant group. By focussing on the four supplementary questions, stimulated by my conversation with Professor Dweck, I aim to suggest a tentative finding to my main research question.

## **1.8 Thesis Structure**

This introduction presented the purpose, rationale, context, research stance and methodology of this study. Chapter 2 provides a critical discussion of the literature which underpins the rationale for my research. Chapter 3 addresses the details of the research process, the ways in which the research questions were addressed and the approaches taken to data collection and analysis. Chapters 4 and 5 outline and discuss the findings in relation to each of the research questions, at both an individual and collective level. Chapter 6 provides a summary of my main findings and conclusions, considers the appropriateness of my chosen methods, the possible limitations of my research and issues related to practitioner research and reflexivity. Chapter 6 also discusses the quality of my research, considers the possible implications of this study for professional EP practice and potential next steps. Finally, I include personal reflections as additional information relevant to the issues of reflexivity in this thesis.

## **CHAPTER 2: LITERATURE REVIEW**



*Individuals “at first scarcely visible, change into more complicated figures...”*

### **2.0 Introduction**

This thesis provides an account of an exploration into the application of Dweck's research to pupils with SLC difficulties. Chapter 1 contained a broad outline of Dweck's research and presented the context for this thesis. This chapter provides a critical overview of relevant literature. In addition to consulting Dweck and colleagues' research, the following procedures were followed to locate relevant articles. Firstly, I conducted an electronic search of databases (including Google Scholar, Science Direct, Sage Journals, JSTOR, ERIC and Informaworld) using search terms defined by the research questions. In particular, I used the search terms self-concept, self-esteem, self-theories, learning beliefs and behaviours, and disability paradigms. Following this, I conducted an examination of books, journals and electronic sourced research studies which suggested new terms and areas of research literature to consult; electronic searches were screened for relevance on the basis of titles and abstracts.

This literature base is wide ranging and overlaps in parts; however, I attempt to present research within a logical structure to allow the reader to follow my argument. Self-concept and self-esteem research is included as the basis for

self-theories and subsequent learning beliefs and behaviours. This will be explained and explored in detail.

Finally, I consider the implications of literature related to disability in order to understand how a label of SLC difficulties may impact upon pupils' self-beliefs. I conclude with an explanation of how these various threads combine to create a rationale for my research focus and questions.

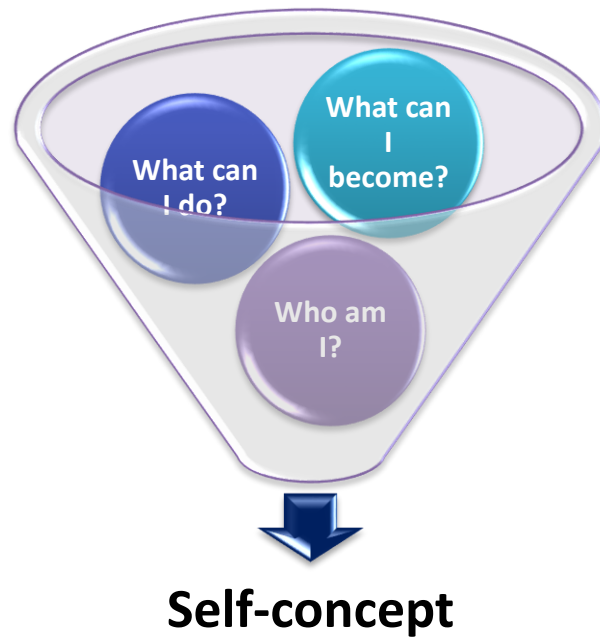
## **2.1 Self-concept**

Developing positive self-concept is proposed as being central to a sense of self, integral to healthy psychological development (Harter 1986, 1988), and is associated with positive psychological, physical, social and academic outcomes (Marsh and Hau, 2003). There is, however, no universally accepted definition of self-concept. Begley and Lewis (1998) suggest that this may be due to self-concept being used as a general term combining multiple aspects of self.

Early research viewed self-concept as a stable and global structure (Mortimer and Lorence, 1981; Swann and Read, 1981; Tesser and Campbell, 1983). More recently, researchers regard self-concept as flexible, changing in response to external influences, dynamic rather than stable (Campbell, Assanand and Di Paula, 2000; Nowak and Vallacher, 1998). Nowak and Vallacher (1998) propose that global patterns of an individual's self-concept emerge from the interaction of local cognitive and affective elements (e.g. attitudes, memories, goals and skills). This dynamic process allows several possible expressions of global self-concept to emerge (Nowak and Vallacher, 1998).

Self-concept is, at least partially, believed to be moulded through interactions with other individuals and groups by means of various contextual influences (Nowak, Vallacher and Zochowski, 2002). These interactions serve to set internal parameters, which constrain the development of self-concept to a limited set of global patterns. The proposal of self-concept as a hierarchical construct has remained more contentious with suggestions of insufficient evidence to reliably support this hypothesis (Yeung, Chui, Lau, McInerney, Russell-Bowie and Suliman, 2000).

At the simplest level, self-concept may be viewed as an individual's perceptions of their own attributes, skills and knowledge. Within this thesis, I consider self-concept to be the beliefs and evaluations people hold about themselves that determine who they are, what they can do and what they can become. Crucially, I view self-concept as a subjective construct and not as any indicator of a 'real' self. Figure 1 illustrates this overleaf.



**Figure 1** *Self-concept conceived as the combination of individual's perceptions of aspects of themselves.*

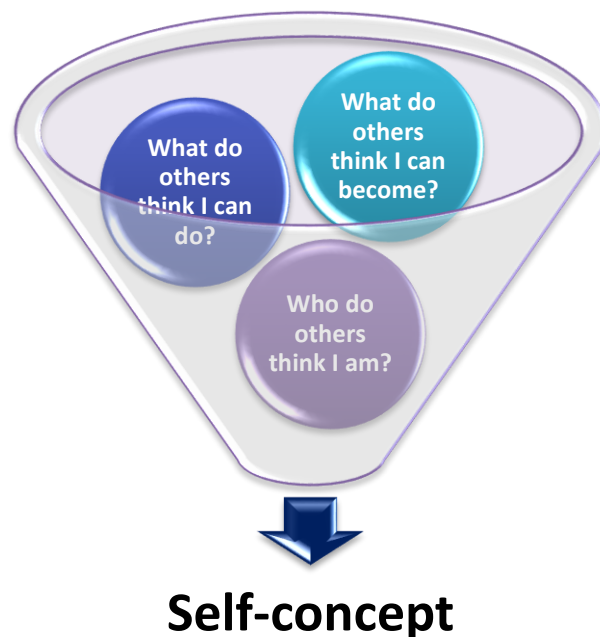
### **2.1.1 Constructing Self-concept**

Contrasting views on the formative process of self-concept exist. It is, however, generally accepted that self-concept is nested within social contexts and interactions, although theories vary in the importance attached to individual phenomenological interpretation (Epstein, 1973). The symbolic-interactionist perspective (Cooley, 1902; Mead, 1934) proposes that the perceived views of others, i.e. 'the looking glass self' (Cooley, 1902; Franks and Gecas, 1990), causally determines self-concept, which emerges from the reflected appraisal process (Gecas and Burke, 1995). Although some beliefs are gained by direct experience, the judgement of others is believed to be the main influence on each individual's view of 'self'. According to the reflected appraisal process, significant others (people who matter to the individual) communicate their appraisals and

this affects the way individuals view themselves. There are three main elements of the 'looking glass self' (Yeung and Martin, 2003). Individuals:

1. Imagine how they appear to others.
2. Imagine how others judge them.
3. Develop their self-concept through these perceptions.

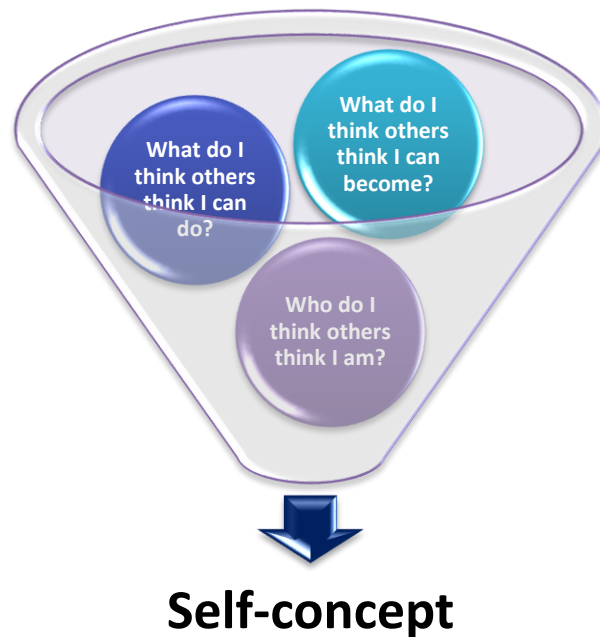
Figure 2 illustrates that the answers to the questions posed in Figure 1 includes feedback from others.



**Figure 2** *Self-concept conceived as individual's beliefs based on feedback from others.*

However, as Shrauger and Schoeneman (1979) suggest, instead of an individual's self-concept resembling how other's actually view them, self-concept beliefs are filtered through individual perceptions and stem from how each individual believes others regard them. Now feedback is no longer considered to be straightforward as individuals may perceive feedback which differs from the actual judgements or beliefs others hold. This effectively highlights my earlier

point that each individual's self-concept is highly subjective. This is illustrated in Figure 3.

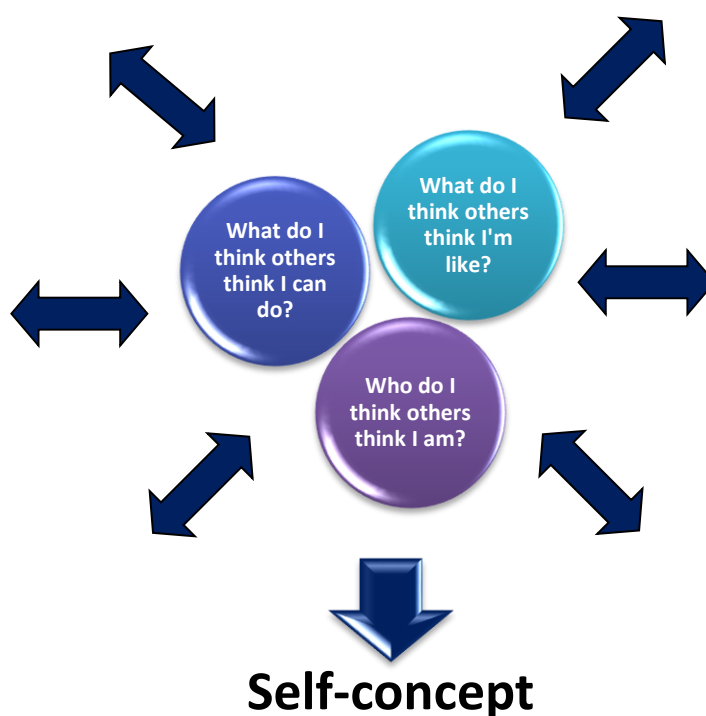


***Figure 3 Self-concept conceived as the combination of individual's perceptions of how they believe others regard them.***

In contrast, social comparison theory (Festinger, 1954) suggests that the subjective comparisons an individual makes between their own attributes, beliefs and attainments and those of their immediate reference group, will provide the basis for creating and shaping self-concept. The emphasis on subjective evaluative processes contributing to self-concept corresponds with the humanistic proposal that in understanding self-concept, each individual's subjective view of the world is more important than objective reality. Rogers (1986) maintains that individuals behave in the ways that they do, on the basis of their perceptions of their current situation. Perceptions drawn from the external world provide the basis of self-concept maintenance (Burns, 1979).



As a result of changing experiences and continuous assimilation of new perspectives and interpretations, self-concept is considered to be neither a stable concept nor one that develops in a sequential manner (Markus and Wurf, 1987; Onorato and Turner, 2004; Rogers, 1951). Self-concept is instead viewed as illustrated in Figure 4; the 'cone' in Figures 1, 2 and 3 has disappeared to suggest an open, fluid and dynamic process.



***Figure 4 Self-concept conceived as the combination of individual's perceptions of how they believe others regard them together with a two-way process of feedback, self-evaluation and comparison.***

Combining these perspectives, self-concept could be viewed as the set of meanings individuals hold about themselves based on their opinions of themselves, assumptions about who they are, based on the reaction of others towards them and evaluations of themselves when compared to others.

Research literature indicates that social context and the role of others are integral in understanding self-concept. Shavelson, Hubner and Stanton (1976) highlight the importance of environmental reinforcements. The role of significant others, such as parents, peers and teachers, is also believed to be critical in forming and shaping self-concept (Burnett, 1999; Demaray, Malecki, Rueger, Brown and Summers, 2009; Meeus, Oosterwegel and Vollebergh, 2002). Over time, social relations and an evaluation of these in relation to the self, provide each individual with views of their behaviours, successes and failures, leading to an internalised self-representation. However, in some situations, particular feedbacks and contextual factors may have more influence than others; for example, in an educational setting, the impact of feedback from teachers and peers may be more relevant to self-concept than feedback from parents (Meeus et al., 2002). Therefore, self-concept at school appears to be affected by the perceptions that significant individuals have of each pupil (Burns, 1982; Harter, 1986) and by social comparison within this context (Rogers, Smith and Coleman, 1978). Rohner's theory (1980, reviewed in Mrug and Wallander, 2002), suggests that feelings of acceptance or rejection from significant others affect the way that individuals view and evaluate themselves and their world.

Self-concept is also thought to be closely linked to academic attainment with poor self-concept possibly related to lack of academic success (Shavelson et al., 1976) and high achievement linked to positive self-concept. Consequently, self-concept could be viewed as dynamic, interacting with school achievement (Enam, 2006). The directionality of this association remains unclear; high achievement may lead to high self-concept or high self-concept may lead to high achievement. Despite identification in the literature of the importance of contextual factors, this is an

area of self-concept research still lacking sufficient acknowledgement. As Lannegrand-Willems and Bosma (2006) recognise, there is little exploration of the importance of an educational context on the formation and validation of self. If self-concept is a critical component of cognitive and social development, it appears important to develop understanding of its formation and dynamic interaction within environments such as a school. In order to consider this further, it is necessary to consider how individuals 'feel' about themselves and their abilities. To do this, I now explore self-esteem.

## **2.2 Self-esteem**

The term used to label the evaluative part of self-concept is self-esteem and this has been the focus of a significant amount of research (Rosenberg, 1979). Gecas and Burke (1995) suggest that interest in self-esteem is mainly due to the assumption that high self-esteem is associated with positive outcomes, such as high achievement, whilst low self-esteem has negative associations with negative outcomes, such as low achievement. These associations could be misleading as research shows that they can be inconsistent, with variations possibly rooted in measuring self-esteem in global rather than specific terms (Hoelter, 1986; Rosenberg, Schooler, Schoenbach and Rosenberg, 1995) or, indeed, believing that self-esteem is something that can be accurately captured or measured at all. Nevertheless, research has explored self-esteem from various perspectives: for example, as an outcome (Rosenberg, 1979), as a buffer against stress (Longmore and DeMaris, 1997) and as a motive that influences behaviour (Kaplan, 1975; Tesser, 1988).

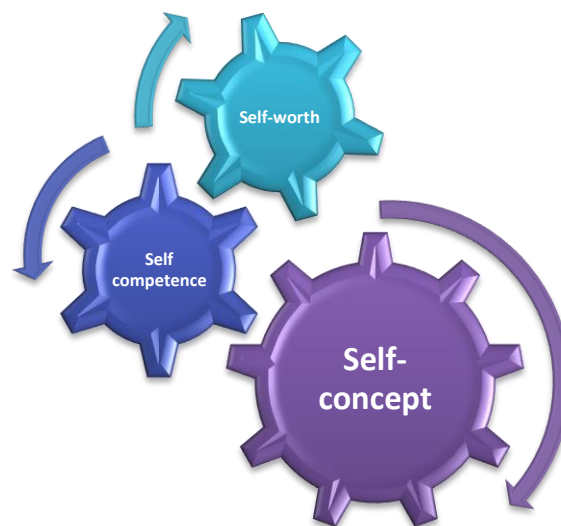
Mruk (1999) reviewed several self-esteem theories and found that the main definitions of self-esteem fall into two categories: those which focus mainly on self-worth (for example, Coopersmith, 1967; Rogers, 1961), and those based upon judgements of competence (James, 1890/1983; White, 1963). Mruk (1999) proposed a two-dimensional model which views self-esteem as the integrated sum of self-worth and self-competence. Mruk suggests that for individuals to have positive self-esteem, they need to feel confident about their sense of self-worth (belief that they are a good person, worthy of respect and consideration) and their sense of self-competence (belief that they are able to successfully meet challenges). Feeling confident in only self-worth or self-competency alone is not enough for self-esteem to be high.

A similarity between self-competence and Bandura's concept of self-efficacy is evident. Although Bandura (1997) conceived self-efficacy as independent of self-esteem, in some respects, it is arguable that any difference is hard to sustain. Tafarodi and Swann (2001) state that experiences of success and failure influence a sense of self not only at the cognitive level but also as a positive or negative value. They propose that: "general self-efficacy, defined as global expectancy, and self-competence, defined as a global dimension of self-value, are but two consequences of the same cumulative process. Namely, self-competence is the valuative imprint of general self-efficacy on identity." (Tafarodi and Swann, 2001, pg. 655).

Support for a two-dimensional model of self-esteem can also be found in Branden's work (1969, 1994) and studies by Tafarodi (e.g. Tafarodi and Swann, 1995; Tafarodi and Milne, 2002) and this model has been adopted by the National Association for Self-Esteem (Reasoner, 2004).

A two-dimensional model of self-esteem has implications for its measurement. However, it cannot be assumed that self-esteem can be meaningfully measured as “there is no objective criterion against which to compare self-reported self-esteem, because of the nature of the construct: self-esteem essentially consists of how a person thinks about and evaluates the self” (Baumeister, Campbell, Krueger and Vohs, 2003). A critical analysis of self-esteem measures carried out by Blaskovich and Tomaka (1991) found a small number of measures which resist critical scrutiny, including Rosenberg’s Self-Esteem Scale (Rosenberg, 1965). Tafari and Milne (2002) showed that Rosenberg’s scale could be based on two factors, self-worth and self-competence; the scores for these show how the two judgements contribute to the overall level of self-esteem.

Figure 5 illustrates how these judgements may influence self-concept in a dynamic process, altering in relation to feedback, context and circumstances.



**Figure 5** *Self-concept and two components of self-esteem conceived as interlinked dynamic processes – as one changes, so does the other.*

### **2.2.1 Self-esteem and Academic Achievement**

Reviews of the literature (Emler, 2001; Baumeister et al., 2003) have cast doubt upon the relationship between self-esteem and school performance. Emler (2001) considers possible reasons for the lack of evidence of any causal relationship and suggests that one reason may be that studies have used measures of global self-esteem. Emler (2001) suggests that one way forward would be to look for links with more specific aspects of self-esteem and concludes with the suggestion that self-esteem and educational attainment are related, but not strongly. Although there appears to be limited evidence of self-esteem having a direct impact on academic performance, it is possible that improved attainment has a positive influence on self-esteem (e.g. Kohn, 1994). Furthermore, improved self-esteem may impact upon learning behaviours (such as motivation, effort and engagement) rather than directly upon attainment.

The process of enhancing self-esteem also appears to be problematic. Firstly, there is little evidence of self-esteem enhancement programmes producing significant and sustained gains in measured self-esteem (Emler, 2001; Gurney, 1987; Haney and Durlak, 1998). Furthermore, researchers contend that attempts to raise self-esteem, including over-emphasis on the self and misapplying praise, might have adverse consequences (Baumeister et al., 2003; Elliott, 2002; Seligman, 1995). Research by Miller and Moran (2006) has highlighted a number of important issues, including schools focussing mainly on the self-worth aspect of self-esteem enhancement. This has contributed to what Mruk (1999) called the 'self-esteem backlash'. Mruk states that a sense of competence, as opposed to worth, tends to be based on observable behaviours. Teachers in the UK and USA have been observed to over-state pupils' abilities to raise their sense of

competence (Elliott, 2002). However, it can be argued that it is not helpful to tell a pupil that they are good at something when it is obvious that this is not the case. For example, Dweck (2002) argues that self competence cannot be created by a teacher telling a pupil that they are doing well: "Giving students easy tasks and praising their success tells them that you think they're dumb." (pg. 117)

One possible reason for teachers' not wanting to give truthful comments about pupils' work may be because they are concerned about damaging the pupil's self-esteem. Miller and Moran (2006; pg. 11) suggest that "teachers may now be moving from a 'blind' approach to praise"; however, "there remains a widespread perception that generous praise is important to protect or enhance self-esteem." Miller and Moran (2006) also propose that the approach to self-esteem in schools needs to be more balanced, and stress the importance of developing the self-competence aspect of self-esteem. They maintain that this is unlikely to be achieved with the use of commercially available self-esteem enhancement programmes. On the contrary, Miller and Moran suggest that what is needed is to reconsider some fundamental aspects of day-to-day classroom interaction. They propose that different classroom strategies will work more effectively on different dimensions of self-esteem; approaches that are designed to enhance one dimension will not necessarily improve the other.

In my experience, commercially available programmes designed to raise self-esteem tend to focus on activities that aim to help children feel valued; they often attempt to encourage a sense of self-worth by stressing the positive qualities, attributes or skills of each child. This self-worth perspective seems to underpin the focus of most self-esteem texts produced for primary school classes (e.g. Canfield and Wells, 1994; Curry and Bromfield 1994; Lawrence, 1996; Mosley,

1993, 1996; Wetton and Cansell, 1993). However, given the two-dimensional perspective of self-esteem, self-worth building activities need to be balanced with experiences that develop self-competence.

There is evidence that a number of formative assessment techniques are associated with gains in self-competency (Craven, Marsh and Debus, 1991; Schunk, 1996; Thomas, Bol, Warkentin, Wilson, Strage and Rohwer, 1993). Miller and Moran (2006) commented on a study using a two-dimensional measure of self-esteem which found small gains in self-esteem after six months of formative assessment. This study (conducted by Miller and Lavin in 2005), involved 16 primary classes and their teachers and used a mixed-method approach, with both qualitative and quantitative measures highlighting the role of self-competence. Miller and Moran (2006) comment that it is noteworthy that the greatest gains in self-competence and overall self-esteem occurred in those children who, initially, appeared to have a negative view of their abilities.

There is growing evidence that particular approaches taken by teachers can help raise pupil self-esteem. Miller and Moran (2005) found that encouraging a 'can-do' culture in classrooms raised self-esteem by addressing self-competence. An effective approach was to challenge self handicapping beliefs by helping pupils understand that current abilities can improve with effort and support. This mirrors aspects of self-theories research and leads to the next section of this review exploring the literature base regarding intelligence, self-theories and their relevance to learning behaviours.



### **2.3 Self-theories**

Learning outcomes are considered to be rooted in the beliefs individuals hold regarding fixed (entity theorists) or growth (incremental theorists) conceptions of intelligence (Dweck and Leggett, 1988; Mueller and Dweck, 1998). Here 'learning outcomes' encompass any learning, (a development in knowledge, skills and/or understanding) that occurs as a result of a learning opportunity (planned or unplanned).

Entity theorists are thought to be more concerned with outdoing others in order to demonstrate their intelligence. Their aim is to perform well rather than learn well; this leaves them vulnerable to negative feedback. Consequently, when involved in learning opportunities, these pupils are more likely to give up when there is a risk of error or failure. Furthermore, when they are making mistakes, struggling or they think learning is too challenging, they are likely to opt out. Where areas of weakness are exposed, these pupils may also reject support and assistance (Chiu, Hong and Dweck, 1997).

Incremental theorists, in contrast, are more likely to believe that they can increase ability through improved effort and are more likely to be attracted to tasks that offer challenge. Additionally, in line with their view that intellectual growth is possible, they may be more willing to accept assistance and advice when they experience academic difficulties (Chiu, Hong and Dweck, 1997).

Overall, self-theories research shows that individuals approach achievement situations with expectations of the qualities of themselves that are being judged. These expectations stem from their belief systems (such as their implicit theory of intelligence) or from situational factors (such as the feedback they have

received). This creates a framework of interpretation centred on what an individual believes is being measured by achievement tasks. This framework then regulates their choice of goals, their attributions for success and failure (see section 2.4), increases or decreases in their performance and their inherent motivation (Hong, Chiu, Dweck, Lin and Wan, 1999).

An individual with an entity theory of intelligence is likely to view achievement situations in terms of fixed intelligence beliefs. As a result, they may develop a belief that achievement tasks measure permanent intelligence. Individuals may then believe that any need for effort is indicative of lower intelligence because they consider that clever people would not need to try hard. Consequently, there may be a reluctance to invest in the effort needed for success and also, a decrease in effort in the face of setbacks. Here, challenging tasks and academic struggles may create anxiety, possibly leading to self-handicapping behaviours (Rhodewalt, 1994) and lowered motivation (Hong, et al., 1999).

Research has considered the degree to which children's beliefs about the nature of ability influence their task choice and persistence in achievement situations (Bempechat, London and Dweck, 1991; Dweck and Bempechat, 1983; Dweck, Chiu and Hong, 1995). In particular, children who believe that intelligence is unlimited and malleable (incremental theorists) have been shown to prefer challenging tasks over non-challenging tasks, even if their confidence is low. When they encounter difficulties or failure, incremental theorists tend to become more persistent and use problem-solving strategies (Quihuis, Bempechat, Jimenez and Boulay, 2002). Issues of ability are not as important for incremental theorists due to their orientation towards increasing their skills and knowledge.

Although this research has been important in understanding children's different approaches to learning, there are some fundamental methodological and conceptual problems that limit the degree to which research findings can be applied generally across settings and varied pupil populations (Schunk, 1995). I will now consider each in turn.

### **2.3.1 *Conceptualising Intelligence***

There are many definitions of intelligence which literature suggests are shaped by the culture, place and time in which they originated, (Tomic and Kingma, 1998). Most reflect the psychometric approach (Gross, 2001), i.e. measuring differences in individuals through standardised testing. These definitions can be divided into a narrow concept of general intelligence, called 'g', (Spearman, in Gross, 2001), and those suggesting a broader view (e.g. Binet and Wechsler, in Gross, 2001), which tries to incorporate more than only a cognitive conceptualisation. Others reject the idea of intelligence as a noun, proposing instead that intelligence should be considered as an adjective incorporating the notion of intelligent activity (Heim & Ryle, in Gross, 2001). This lack of agreement plays an important role when suggesting that intelligence is malleable, as high IQ scores are not necessarily the same as high intelligence. The belief that intelligence is hereditary (i.e. differences in IQ are inherited) is embedded in the theory that IQ tests measure something that is both intrinsic and fixed. As Gigerenzer (1997) states: "... some 90 years of factor analyzing and correlating IQ tests has not noticeably increased our understanding of the mechanisms of human intelligence." (pg. 284)

In spite of the limitations of IQ tests, they are used in the majority of research studies with the implication that “intelligence is what intelligence tests measure” (Tomic and Kingma, 1998; pg. 2). However, the possibility of measuring something depends on being able to define precisely what it is that is actually being measured; presently a satisfactory definition of ‘intelligence’ does not exist.

According to Sternberg and Grigorenko (1997), virtually all researchers accept that both heredity and environment contribute to intelligence. Further evidence supporting the view that environment, experience and opportunity contribute to intelligence comes from the Sutton Trust’s report into social disadvantage (Blanden and Machin, 2007) which states that children from the poorest 20% of households but in the most able group (in terms of IQ scores) drop from the 88<sup>th</sup> percentile on cognitive tests at age three to the 65<sup>th</sup> percentile at age five. Those from the richest households who were measured as least able at age three move from 15<sup>th</sup> percentile to 45<sup>th</sup> percentile by age five. Howe (1997) argues that raising intelligence substantially and permanently requires a major investment in time and effort but argues that under the right conditions, and given the opportunity, intelligence can be increased considerably.

The suggestion that intelligence is malleable, as demonstrated by changes in IQ scores, is compatible with Dweck and colleagues work. However, accepting intelligence as a measure of IQ is a reductionist approach; in my work, I am not assuming intelligence can be measured, nor am I concerned with attempting to do this. Whether intelligence is malleable appears less important than what individuals believe to be the case (Dweck and Leggett, 1988; Chiu, Hong and Dweck, 1997). The ability to participate productively in learning activities requires

not only sufficient intelligence but also motivation, attention, commitment, persistence and effective use of appropriate learning strategies (Frederickson and Cline, 2002). Within this research, I am conceptualising intelligence as:

“... the application of cognitive skills and knowledge to learn, solve problems, and obtain ends that are valued by an individual or culture. Intelligence is multifaceted and functional, directed at problems of adaptation. It is also to some extent culturally shaped and culturally defined, since cultural practices support and recognize intellectual qualities that are useful in the social and ecological context.” (Westen, 2002; pg. 280)

### **2.3.2 *Methodological Concerns***

The identification of entity and incremental theories has occurred within the context of studies where likert or forced choice questions have been used to classify individuals into one of two distinct categories (Dweck and Henderson, 1989). This suggests that these constructs are imposed on the participants by the researchers, rather than being derived from expressions based on their own understanding; as a result, participants' perspectives are largely absent. By reducing the possible responses into a dichotomy of either fixed or incremental self-theories, findings may be overly simplistic and fail to address the learning context (Bempechat and Boulay, 2001).

According to a number of researchers, it is possible that individuals may hold aspects of both theories at the same time, depending on situational and contextual factors (Schunk, 1995). For example, Anderson (1995) has suggested that, because individuals' self-theories can be readily manipulated, knowledge and attitudes related to both entity and incremental theories can be held simultaneously. Individuals choose to make use of one or the other within a given situation.

Additionally, this methodological approach imposes abstract categories on individuals' understanding of intelligence. According to Nicholls (1990), it is not helpful for researchers to focus on how students conceptualise ability; researchers should focus their efforts on exploring the meanings that students attach to their work. Nicholls also suggests that it is better to ask children what they think ability is, and to consider differences in their answers. A key point is that researchers should not force their own ideas of ability onto students; it is important to know that a student's personal classification of entity or incremental theory is based on their own views and understanding.

### **2.3.3 *Semantic Concerns***

It appears that the entity view of intelligence is similar to a view of 'ability as capacity' and Nicholls (1990) argues that Dweck and colleagues equate 'ability' and 'intelligence' in their work, which possibly ignores important differences between the two constructs. By assuming that these words have similar meanings, Dweck assumes that intelligence manifests as ability and that ability implies intelligence. Furthermore, Dweck and colleagues have focused on conceptions of ability across different domains, such as intellectual, social, physical skills and physical appearance (Bempechat, London and Dweck, 1991), but they have not considered whether individuals hold different self-theories in different academic areas. For example, an individual may hold an entity theory in maths but an incremental theory in art.

### **2.3.4 *Cultural Concerns***

Murphy and Alexander (2000) highlight that most self-theories research was undertaken by American researchers studying American students. Consequently,

they raise the question whether the research can be generalised. For example, some of the phrases and concepts used in the research may be understood differently, depending upon the context and culture within which they are used.

Furthermore, perceptions of ability may differ across cultures. The terminology used within Dweck's questionnaires contrast being "smart" with being "dumb". These terms don't translate directly for English pupils where "smart" could also mean well-dressed and research suggests that the idea of "smart" in America refers to something that can be increased through effort; the harder you work, the smarter you can become. This suggests that Dweck's term "smart" relates to knowledge rather than some innate intellectual capacity. However, I suggest that the term 'intelligent' seems to indicate an inherent attribute that is more resistant to change. Therefore, it cannot be assumed that 'smart' and 'intelligent' are semantically alike; they do not necessarily express an equivalent construct. Similarly, it cannot be assumed that apparently straightforward concepts such as effort or hard work mean exactly the same to different individuals. The term 'effort' could be understood differently depending upon the usual level of effort for each pupil; the idea of working harder depends upon what each pupil thinks of as 'normal'.

I will now proceed by considering research relating to learning beliefs and how beliefs about learning and personal ability to learn may develop from the self-beliefs that pupils' hold.

## **2.4 Learning Beliefs**

“Our ideas about what people can learn and should be learning, as well as what they should be doing with what they learn, depend on our concept of learning itself”.

(Lakoff, 1987)

Researchers have been interested in learning for many years but, in general, have found that the concept of learning is problematic. “Learning is a term with more meanings than there are theorists,” (Hager, 2004, pg.4, referring to Brown and Palincsar; 1989). Schoenfeld (1999) commented on the wide variation in beliefs about the nature of learning. Research has largely emphasised the perspective of the researcher with less attention focused on descriptions of learning and the learning process by the learners themselves.

In the past, pupils’ ideas and beliefs about learning have been studied in two ways: the phenomenological approach, which uses qualitative research to analyse the various meanings of learning that people hold (e.g. Marton, 1981), and the metacognitive approach, which has investigated what pupils think about learning alongside other concepts (e.g. Cano and Cardelle-Elawar, 2004). Both perspectives are rooted in Perry’s (1968, 1970) longitudinal research exploring epistemological development, which suggested a developmental shift in how students perceived knowledge and learning, from a static, absolute concept of learning and knowledge to a contextual concept of the learning process.

If attitudes and beliefs influence how individuals behave, then this may also apply to learning behaviours including, for example, motivation and engagement in learning opportunities. This may lead to less effective learning, regardless of the actual skill or ability of the individual. Without positive attitudes and beliefs, individuals have less chance of learning effectively as conceptions of learning



have been shown to have a significant influence on the way pupils choose to approach their learning (Van Rossum and Schenk 1984) and, hence, on the quality of their learning outcomes (Marton and Säljö, 1976).

The view of learning as a 'process' or learning as a 'product' (Merriam and Caffarella 1999; Tight 2002) may also have some relevance to how pupils approach and engage with learning opportunities. Hager (2004) observed that educational policy appears to adopt the 'learning-as-product' view even though there are a number of well documented problems with this position. The 'learning-as-product' viewpoint assumes learning can be neatly 'chunked' and transmitted to learners in a straightforward way. If a pupil's view of learning is influenced by teaching methods that are based mainly on the transmission of knowledge, they may think that they lack ability if they cannot answer questions. It is possible to argue that this view of learning mirrors education in English schools today, where achievement and progress are measured on the basis of demonstrating knowledge and skills divided into 'chunks' based on the National Curriculum and levels of presumed difficulty. Here, learning produces measurable outcomes and less importance is placed upon the process or functionality of learning (Watkins, Carnell and Lodge, 2007).

With school performance subject to "hyper-accountability" (Mansell, 2011; pg. 298), staff are under increased pressure to ensure that their pupils reach the prescribed standard. One response has been to narrow the curriculum and teach to the test (Mansell, 2007). However, this view appears limiting. If the pupils don't know the specific facts required then they may fail to achieve the required grade. However, individuals may simply not know these facts 'yet'. Learning might be more helpfully conceptualised as a process not only as an outcome: a journey

not only a destination. In this way all pupils could experience success. If pupils learning beliefs conceptualise difficulties as temporary, as something that can be overcome with effort and resolve, then they are not regarded as permanent fixed markers, possibly signalling lack of innate ability and failure. In my experience, when pupils perceive a learning opportunity as too challenging or predict possible failure, they may disengage effort and display behaviour called 'learned helplessness' possibly becoming passive or seeking unnecessary assistance. This is considered further in the next section.

#### **2.4.1 *Learned Helplessness***

The concept of learned helplessness stems from research on mental health (Seligman, 1975). This term describes a tendency for some individuals to disengage from a learning opportunity because of the belief that the outcome is not dependent upon their behaviour. As Dweck and Reppucci (1973) explain:

"...a child might perceive independence between his response and failure by attributing the outcome to the influence of some external agent; he might perceive independence between his response and outcome by attributing the outcome to his inability to perform the response, whether this is true or not. In either case, he views the situation as being beyond his control." (pg. 110)

Dweck and Reppucci (1973) found that children reacted to failure in two ways: by trying harder or giving up. 'Helpless' children tended to give up in the face of failure; they took less personal responsibility and attributed the cause of their failure to their lack of ability. However, other children remained determined to achieve, despite their failure. They showed persistence and identified the cause of their failure as due to lack of effort. In the face of failure, 'helpless' children gave up, believing that success was beyond them; 'persistent' children tried even harder believing that success would come from greater effort (Dweck and

Reppucci, 1973). Significantly, Dweck (1999) does not propose that incremental theorists automatically resist learned helplessness, only that they are less likely to behave in this way than entity theorists. If learning behaviours can be influenced by perceptions of low self-competency and self-worth, then self-efficacy may also be relevant to understanding why pupils behave as they do in learning situations. This is considered in the following section.

#### **2.4.2 Self-efficacy**

Bandura (1997) defines self-efficacy as “beliefs in one’s capabilities to organise and execute the courses of action required to produce given attainments” (pg. 3). This is thought to have important implications for behaviour (Maddux and Gosselin, 2003). Specifically, self-efficacy beliefs are believed to influence the choice of goals, persistence at reaching those goals, as well as influencing reactions to setbacks (Maddux, 1993; 2002). Goals are loosely defined as the particular purpose towards which an individual’s efforts are directed (Molden and Dweck, 2000). Whether an individual actually has this control is not as relevant as what they believe to be the case. Positive outcomes have been related to high self-efficacy, such as effectively coping with life’s stresses (Bandura, 1995).

It is possible that self-efficacy, with its clear links to self-competency, could be a key pupil motivational variable that may respond favourably to change within the learning environment. Perceived self-efficacy is considered a significant predictor of learning behaviour (Kennett and Keefer, 2006). Harackiewicz, Barron, Carter, Lehto and Elliot (1997) found that college students who were goal oriented in their studies developed high levels of engagement by the end of the semester. Other research has found that undergraduates who engaged in goal setting behaviour

developed high levels of academic self regulation and confidence and, also, performed better academically compared to non-goal setting students (Kennett and Keefer, 2006). Alternatively, those with a lower self-efficacy often consider that increased effort is a sign of lower ability and tend to choose simpler tasks as a coping mechanism to avoid failure (Dweck, 1999). Lowered self-efficacy beliefs, possibly stemming from regularly experiencing difficulties or poor performance, could limit pupils' levels of engagement in learning opportunities, their goals and achievement motivation and their resilience to challenges or difficulties. I consider this further now.

### **2.4.3 Goals and Achievement Motivation**

There are two main types of motivation: extrinsic and intrinsic. Individuals who complete a task for some kind of benefit or reward are extrinsically motivated; those who complete a task mainly for its own sake are intrinsically motivated. Vansteenkiste, Lens and Deci (2006) undertook a study that showed that intrinsic goal framing produced deeper engagement and more persistence in learning activities, and better understanding when compared with extrinsic goal framing or no-goal framing. It has also been shown that an emphasis on intrinsic goals rather than extrinsic goal produces greater health, well-being and performance (Vansteenkiste, Simons, Lens, Sheldon and Deci, 2004).

Goal orientation theory suggests that there is a relationship between what causes success for pupils at school, and their involvement in learning situations. Pintrich and Schunk (2002) have identified pairs of motivational goals that are typical of pupils' approaches to learning. These have been called task or ego involved goals (Nicholls, 1984), learning or performance goals (Dweck and Elliot, 1983),

mastery or ability goals (Ames, 1992; Ames and Archer, 1988) and task or ability goals (Maehr and Midgley, 1991). I suggest that consideration of goals could help educators understand the psychological processes that create achievement behaviour.

Theory suggests that achievement motivation could be explored by considering different types of goals, one in which individuals try to confirm or demonstrate their ability (and thus avoid demonstrating a lack of ability), and one in which individuals try to develop, create or refine an ability (Dweck and Elliot, 1983; Dweck and Leggett, 1988; Nicholls, 1984). Although different definitions of these goal categories exist in the literature, the distinction between a performance goal (displaying ability) and a learning goal (developing ability) seems the most fundamental (Ames and Archer, 1988; Utman, 1997).

Research (e.g. Dweck and Leggett, 1988) suggests that when individuals are focused on a performance goal and displaying their ability, they tend to see failure as indicative of lack of ability. These individuals are more likely to be disheartened and demonstrate a 'helpless' response should they experience difficulties failure (Elliot and Dweck, 1988; Utman, 1997). In contrast, where individuals are concerned with learning goals and developing their ability, failure or set-backs are more likely to be viewed as part of the learning process and only indicative of the need to try harder or change strategy. Dweck and colleagues stress that they still consider performance goals to be an important aspect of achievement (Dweck, 1991; Heyman and Dweck, 1992). In an attempt to distinguish when performance goals are beneficial, consideration of the literature suggests that progression from attributions to goals omits a significant component of achievement motivation (Elliot, 1997; Elliot and Church, 1997).

Research (e.g. Weiner, 1972, 1994) has explored how learning beliefs might have an influence on motivation and achievement in the classroom. Research initially developed from the view that achievement stems from inner motivation; more recently studies have been based on how the need for achievement and achievement related behaviour is influenced by factors such as confidence, expectancy and beliefs about the nature of intelligence (Weiner, 1972, 1994; Weiner, Graham, Stern and Lawson, 1982).

#### **2.4.4 *Attributions***

Attributions refer to the explanations individuals provide for the causes of behaviour and events (for example, Weiner, 1985). Several questionnaire studies have explored the relationship between academic achievement and achievement related beliefs, such as self-esteem and attributions for success and failure (Bempechat, Nakkula, Wu and Ginsburg, 1996; Marsh and Yeung, 1997). Results suggested that higher achieving students attribute success in school to their ability; however, should they experience lack of success they do not attribute it to lack of ability, (Dweck, 1975; Bempechat, et al. 1996; Marsh, 1984). Conversely, when lower achieving students experience failure this tends to be attributed to lack of ability. Weiner (1994) argues that most students' believed that lack of ability was internal, resistant to change and something over which they had little control. These beliefs may lead individuals to assume that effort is pointless because it is unlikely to produce improvement; this may then lead to a lack of engagement in learning opportunities, leading to lower achievement.

Weiner (1980) developed a theory of motivation that considers the questions that individuals ask themselves about the causes of their successes and failures.

Weiner demonstrated that the different meanings, the attributions that individuals assign to outcomes, can create different emotional and behavioural outcomes (1980). Attribution theory explains how individuals' reactions to these outcomes affect persistence in achievement situations; however, it does not address any factors that initially produce achievement behaviour. Although researchers could identify the affective, behavioural and cognitive consequences of outcomes, questions remained regarding what initially causes individuals to seek success. Trying to understand achievement motivation could help to resolve this. The influence of feedback and praise in the process of attributing success to internal, fixed or external, malleable factors also appears to be important. I consider the role of praise in the following sub-section.

#### **2.4.5 Praise**

Research suggests that a pupil's belief in their academic capabilities influences their motivation, engagement in learning and school performance (Martin and Debus, 1998; Marsh and Yeung, 1997). Empty praise, undue positive feedback, poor estimation of pupils' abilities and/or low expectations have all been suggested to have a negative impact on American children's academic performance (Stevenson, Chen and Uttal, 1990; Stevenson and Stigler, 1992). Empty praise refers to feedback that is vague, sweeping or undeserved, such as being a 'good girl' or 'clever boy' for completing work. Ability praise, after producing successful work, can have a variety of negative effects as it may lead pupils to believe that the praise is insincere (Meyer, 1992; Meyer, Mittag and Engler, 1986) and it may lead them to feel pressured to produce future good performance in order to 'prove' their ability (Baumeister, Hutton and Cairns, 1990; Baumeister, 1984).

Praise for hard work is more helpful (Mueller and Dweck, 1998). Firstly, effort-based praise may lead individuals to focus on the process of their work and the possibilities for further learning and improvement. Because of the emphasis on effort, pupils may feel able to focus on the development of their knowledge and skills through their engagement in learning opportunities. In other words, effort based praise may encourage pupils to adopt learning goals, associated with high achievement motivation (Nicholls, 1984) as well as encouraging persistence in the face of setbacks (Dweck and Leggett, 1988; Elliott and Dweck, 1988). Secondly, pupils praised for hard work may learn to attribute their performance to effort, which can vary and is under their control (Weiner, 1972, 1985). Consequently, they may consider that a deficit in performance is due to lack of effort rather than a permanent lack of ability. Attributions that emphasise effort have been correlated with stronger achievement motivation (Powers, Douglas, Cool and Gose, 1985) and striving for success following failure (Diener and Dweck, 1980; Dweck, 1975; Nicholls, 1976). Therefore, if pupils are praised for hard work, this may lead to displays of more adaptive learning behaviours.

#### **2.4.6 *Relevance to my Pupil Participants***

I consider that, for the pupils included in this study, the relevance of their self-theories and learning beliefs are important because of the possible impact of these beliefs on their learning behaviours, in turn, affecting learning outcomes.

The following section considers how issues related to disability may affect the learning and intelligence beliefs of pupils with SEN in order to understand how pupils with SLC difficulties may perceive themselves and their abilities.



In this thesis, I define disability in terms of the Equality Act (2010) as “a physical or mental impairment that has a ‘substantial’ and ‘long-term’ negative effect on” an individual’s “ability to do normal daily activities” (<https://www.gov.uk/definition-of-disability-under-equality-act-2010>). This means that all the pupils in this study would be defined as disabled.

## **2.5 ‘Special Needs’ ~ Constructing Disability**

Singal (2007) states that:

“Disability is a multi-dimensional and complex construct and there is no single universally accepted, unproblematic definition of disability. Disability is defined in different ways in different countries and these definitions differ and change within a country with evolving legal, political and social discourses.”

(2007, pg. 8)

Harriss-White (2003) notes that “disability is a relative term because cultures define differently their norms of being and doing” (pg. 3). Therefore, how disability is defined and perceived depends upon the paradigm or frame of reference used. Covey (1989) states that individuals interpret everything they experience through paradigms, often unwittingly and often without questioning their accuracy. Individuals assume the way they view things is the way they really are and from these assumptions, attitudes develop. Paradigms form the foundations of attitudes and behaviours.

Covey (1989) explains that exploring paradigms is crucially important:

“The more aware we are of our basic paradigms, maps, or assumptions, and the extent to which we have been influenced by our experience, the more we can take responsibility for those paradigms ... and be open to their perceptions, thereby getting a larger picture and a far more objective view.” (pg. 29)

Disability can be viewed as medically or socially constructed (although other paradigms exist). The medical model implies an innate pathology meaning that

treatment is usually focused on aspects within the individual. The social model implies that problems are located externally, within the environment and wider contexts. Here external adaptation and change are viewed as necessary in order to improve the situation for the individual. I now consider these in turn.

### **2.5.1    *The Medical Model***

The medical model views disability as the result of physical, cognitive or biological conditions, which are part of the individual and cause clear disadvantages. Consequently, managing the disability revolves around its identification, understanding it and learning to control or alter its course. Therefore, health care services attempt to 'cure' or ameliorate disabilities, to improve functionality with a view to allowing a disabled person to live a more 'normal' life. 'Normal' here appears to refer to the point of view of the person making the judgement. For a wheelchair user, using a wheelchair would be regarded as 'normal'. The medical model of disability is dichotomous; normal and disabled are clearly delineated and disability is pathologised, unwanted and is less than, or not as good as, being 'normal'. Medical definitions of disabilities are, "partial and limited and fail to take into account wider aspects of disability" (Oliver, 1990; pg. 5). However, the paradigms of those with disabilities may result from understanding and interpreting the meaning of their disability within a medical rather than a social frame of reference.

Labelling exacerbates this, as Barton and Tomlinson (1984) explain:

"Labelling is an integral part of medical and behavioural management, since, without the definitional act of diagnosis, further intervention or treatment would be impossible. Defining or treating a child as disabled or deviant directs attention away from the social and structural, since it takes the individual as its unit of concern." (pg. 111)

Lloyd states that labels are produced through a “discourse of disciplinary knowledge that is constituted by a complex mixture of professional, theoretical and personal perspectives” (Lloyd, 2006; pg. 219). Furthermore, Lloyd argues that these labels are not objectively established but are relational; they depend on an assumed idea of normality.

A label communicating disability may affect an individual’s whole identity, not just those aspects that might be considered medically affected (Blatt, 1987). Furthermore, labelling has been traditionally used to place individuals within a ‘hierarchy of inability’ and then impose an artificial limit on their capacities with the implication that their abilities are static, without the potential for change. Terminology and services linked to the degree of learning difficulty correspond with this. For example, some services only become available to individuals if their intelligence, measured by Intelligence Quotient (IQ), is below 70. In order to access some services (for example, support from social services learning disabilities’ team) deficits need to be proven.

### **2.5.2    *The Social Model***

In contrast, the social model of disability assumes that societal rather than within person deficits create disability, and that disability is, therefore, socially constructed (Oliver, 2004). It recognises that, judged from a statistical mean, some individuals have physical, intellectual or psychological differences. However, these differences do not have to imply a disability exists unless society fails to accommodate and include these individuals in the way it would for those considered 'normal.'

“The social model of disability has been used to explain the ways in which disability is constructed by society and as a call to action against the oppression of disabled people. In contrast, the medical model—an objectivist account of disability within which various theories operate—has been used to explain, diagnose, treat, and ‘cure’ disability as pathology.”

(Gabel and Peters, 2004; pg. 588)

Although many disabilities are stated to exist along a continuum, (for example, autistic spectrum disorder), criteria exist to define who does and who does not meet the required standard to gain the label (APA, 2011). Therefore, even along a continuum, a dichotomy may exist. McDermott elaborates on the idea of normality and homogeneity and states,

“There is never a question of whether everyone is going to succeed or fail, only of who is going to fail. Because everyone cannot do better than everyone else, failure is an absence real as presence, and it acquires its share of the children. Failure and success define each other into separate corners, and the children are evenly divided as if by a normal curve, into successful and failing. Among those who fail are those who fail in ways that the system knows how to identify with tests and these children are called special names.”

(McDermott, 1996; pg. 301)

If some children ‘fail’ simply because others ‘succeed’ then this supports the social model of disability. Pupils’ SEN may or may not exist, but it seems possible that it is the comparison with other pupils that creates the need to label children in order to explain the differences observed. The label in itself does not change anything for the child; difficulties will continue to exist (or not) with or without a special name. However, it is the assumed meaning of these special words that can bring about change for the child.

Christiansen (1992) considers aspects of the assignment of labels:

- “1. Labels are negative in their depiction of deficits.
2. The labels become the defining characteristic of the person, denying their complex whole.
3. The use of labels for identifying 'special education needs' fails to properly locate failure in the education system.”

(Christiansen in Slee, 1993; pg. 358)

Ferguson and Ferguson (1995) state that, disability is “an experience waiting to be described or, more precisely, a multitude of experiences waiting to be described” (pg. 113) and argue that instead of being concerned with the definition of disability, conveniently packaged as a label, the individual’s experience of disability should be considered. Shakespeare and Watson (2001) claim that disability is “so complex, so variable, so contingent, so situated. It sits at the intersection of biology and society and of agency and structure.” (pg. 19) Therefore, disability cannot be reduced to one, single identity as “it is a multiplicity, a plurality” (pg. 19). Consequently, a label cannot define or summarise the reality of an individual’s lived experience.

An individual who does not fit the parameters of what is considered normal is perceived as deviant (Perusin, 1994). Hence, deviance can be viewed as largely socially constructed and determined by the judgements of others. However, labelling within the medical model tends to view those with a disability as being different in ‘kind’ rather than by ‘degree’ (Shapiro, 2000). What may be of importance is not to assume all children are the same but rather to expect all children to be different. By removing an expectation of normality, ‘normal’ is no longer valued more than ‘different’. Where a child’s abilities do not meet the expected ‘normal’ standards, this may lead to lowered expectations, assumed knowledge and lead to discrimination.

Shakespeare (2013) acknowledges the benefits of the social model of disability in launching the disability movement, promoting a positive disability identity and creating civil rights legislation and barrier removal, but states:

“I find the social model unhelpful in understanding the complex interplay of individual and environmental factors in the lives of disabled people. In policy terms, it seems that the social model is a blunt instrument for explaining and

combating the social exclusion that disabled people face, and the complexity of our needs.” (Shakespeare, in Davis (Ed.) 2013, pg. 220).

Neither the medical nor social model of disability provides a universally accepted paradigm to consider disability. Both models have limitations; neither represents a complete way of considering disability (Shakespeare and Watson, 2002). In order to illustrate how paradigms shape the frame of reference that individuals use to perceive, understand or interpret disability, I now consider another model: the ‘personal tragedy’ theory of disability.

### **2.5.3    *The ‘Personal Tragedy’ Theory***

The ‘personal tragedy theory of disability’ (Oliver, 1990) is where disability, or impairment which is equated with disability, is perceived to afflict individuals causing suffering. It is assumed, by non-disabled individuals, that disabled people cannot be happy or enjoy at least a satisfactory quality of life because of their impairments, and “disabled person’s problems are perceived to result from impairment rather than the failure of society to meet that person’s needs in terms of appropriate human help, accessibility and inclusion” (French and Swain, 2004; pg.3). There is an assumption that disabled people want to be ‘normal’, although this may not be stated by disabled people themselves who may perceive their disability as a significant part of their identity (Mason, 2000). Disabled people may be subjected to numerous disabling expectations, for example, to be ‘independent’, to be ‘normal’, to ‘adjust’ or to ‘accept their situation’. It is these expectations that cause difficulties, rather than the impairment itself (French, 1994).

This paradigm possibly reflects a profound irrational fear of non-disabled individuals’ own mortality (Shakespeare, 1994). Another explanation refers to

dominant social values, particularly the perception of disability as synonymous with abnormality and dependence (Oliver, 1993). A third explanation, however, is based upon how non-disabled individuals perceive their lives and abilities, compared with their perceptions of what it would be like to be disabled. This comparison underpins the perceptions of the 'personal tragedy' that becoming disabled through illness or injury would bring about in their own life, should they be unfortunate enough to ever experience it (French and Swain, 2004). However, this assumes knowledge of what it is like to be disabled. As an outsider, how could a non-disabled individual know what it is like to be disabled? This paradigm again implies that being disabled is notably worse than being non-disabled and suggests that the 'disabled' are a homogenous group. This implication may lead to disabled individuals being stereotyped, which may lead to prejudice and stigma. I consider this further in the following sub-section.

#### **2.5.4 *Stereotypes, Prejudice and Stigma***

Bogdan and Knoll (1988) define prejudice as a "grossly simplified belief about the characteristics of some group of people, which is uncritically generalised to all members of that group" (pg. 466). "When prejudice takes on the form of a specific belief regarding a particular group, it is a stereotype." (pg. 467)

Stereotypes are generalisations about a group of people that distinguish its members from others. Sutherland (1984) asserts that stereotypes become 'self-fulfilling prophecies', forcing the individual with the disability into a role that can then be used to justify their treatment. For example, "someone who is assumed to be stupid is unlikely to receive much intellectual stimulation" (Sutherland, 1984; pg. 59). Stereotypes also have a large influence on how groups think of themselves. As Medgyesi (1996) explains:

“Stereotypes are hard to shake. Even when those words and images evolve into a soft, more politically correct focus, they still pack a wallop in terms of how the world views a particular group. More insidiously, those stereotypes shape the way a particular group views itself within the context of the world-at-large.”

(Medgyesi, 1996, pg. 44).

Discrimination is “the unjustifiable negative behaviour toward a group and its members” (Meyers, 1987; pg. 484). According to Meyers, “Prejudice is negative attitude; discrimination is negative behaviour” (pg. 484).

Labels may work against those with disabilities by creating distorted or lower expectations and stereotyped images of what particular individuals will be like. A label takes the place of a person’s individuality; it defines the essence of that person, obscuring and distorting the perceptions of others. Collective nouns such as “the blind” or “the disabled” evoke an established set of assumptions and stereotypes that assumes that all individuals who have the label are the same, “a small, clearly defined section of society, quite distinct from the public at large – poor dependent creatures, immediately recognizable as physically different from normal people” (Sutherland, 1984; pg. 13).

Goffman defined a stigma as an “attribute that is deeply discrediting” and that reduces the bearer “from a whole and usual person to a tainted, discounted one.” (1963, pg. 3) Stigma occurs when differences are linked to unwanted attributes. A label can lead to a stereotype by linking the person to undesirable characteristics, forming the stereotype that stigmatises the individual. In this regard, a label can become a short-cut to stigma.

Definitions of stigma are variable. For example, Stafford and Scott (1986, pg. 80) propose that stigma “is a characteristic of persons that is contrary to a norm of a social unit” where ‘norm’ is defined as a “shared belief that a person ought to



behave in a certain way at a certain time” (pg. 81). However, Riddick (2000) argues that stigmatisation can come about without labelling and challenges the assumption that labelling automatically precedes and leads to stigmatisation; there is evidence that individuals have been stigmatised prior to a label being attached to them which supports this view.

### **2.5.5 Self-concept, Self-esteem and Disability**

Exploration into the self-concept of individuals who are considered to have additional needs (e.g. those requiring additional intervention and support) is limited, particularly for those that are considered to have more ‘severe’ needs. A number of studies have explored the self-concept of students within the special school population, including students with hearing impairments (e.g. Obrzut, Maddock and Lee, 1999) and ‘learning difficulties’ (e.g. Crabtree and Rutland, 2001; Kelly and Norwich, 2004; Moller, Streblow and Pohlmann, 2009) but results have been mixed and contradictory. Fox and Norwich (1992) argue that further assessment is necessary in order to understand any association between social factors such as labels of disability, stigmatisation and self-concept (Kelly and Norwich, 2004; Norwich 2002).

Labelling tends to focus on negative aspects of individuals and can lead to teasing and possibly the bullying use of derogatory terms. Being singled out as different or not as good as others is unlikely to lead to feelings of high self-competency or self-worth. Lawrence (1996) suggests that pupils with low self-esteem struggle to learn effectively, and children who have lower self-esteem are those who consistently fail and underachieve. This could lead to negative appraisals, from themselves and others, creating a low self-esteem trap

(Lawrence, 1996). Haywood (1997) suggested that it is possible for some people to go through their whole lives thinking that they are inferior and having doubts about their ability because of a label given to them at an early age, even if they go on to achieve subsequent success.

Pupils with SLC difficulties may be more likely to be bullied (Dockrell, Lindsay, Letchford and Mackie, 2006); this is possibly due to problems of understanding or expressing themselves or, also, because of difficulties associated with using inappropriate language for a given context (Bishop, 1998; Bishop, Chan, Adams, Hartley and Weir, 2000). For example, children with pragmatic difficulties are believed to struggle to make and maintain friendships because they struggle to read social cues. Consequently, they may not know what to say or how to behave in unstructured situations and may appear socially awkward. Children with SLC difficulties may also develop behavioural problems, including difficulties with peer relations, which might further predispose them to bullying (Lindsay and Dockrell, 2000).

Riddick (2000) argues that it is not the application of a label that leads to a negative self-concept and low self-esteem, but the behaviours that led to the label being attached in the first place and summarises:

“You still have the same problems whether you are labelled or not, the key question is whether the label enhances or detracts from the way you perceive yourself and are perceived by others.” (Riddick, 2000; pg. 661)

Pupils with labels relating to SLC difficulties may perceive this label as providing a group identity for individuals with SLC disabilities and, consequently, develop group-based identities related to these labels. Finlay and Lyons (1998) suggest that children in the United Kingdom identified with learning difficulties probably

experience a negative social identity, since they are perceived as less likely to fulfil socially acceptable goals in life, such as succeeding at school, living independently and having a successful career. Depending on how pupils with SLC difficulties perceive these difficulties, their perceptions may affect their self-concept due to the presumed fixed nature of the difficulties, and what they believe the label means both to themselves and to significant others.

If children with any form of SEN develop self-concepts that include their own perceptions of the words used to describe their difficulties, difference or disabilities, then how they feel about themselves and their abilities may be affected. Whatever paradigm is used to understand disability, any understanding that develops may depend on the beliefs, feelings and assumptions that the use of this word creates. As labels arise from what others believe qualifies as different or disabled, feedback from others will be key to children constructing their own understanding of these words. Therefore, consideration of stereotypes, prejudice and stigma are also important as the effect of the appraisal of others will also impact upon pupils' self-beliefs. I will now consider how aspects of this wide literature base are relevant to and informed my research.

## **2.6 Relevance to this Research**

Pupils with SLC difficulties have conceivably faced negative messages regarding their difficulties. In an education system where pupils are graded and ranked from a young age, competing in this arena may be tough for these children. The pupils I work with may have developed fixed views about their abilities and intelligence based on their experiences and feedback from others. The implied fixed nature of their SLC difficulties may also imply that their intelligence and their subsequent

ability to learn is fixed in the same way and is, therefore, both limited and limiting. Whether SLC difficulties are fixed or not, pupils' subsequent assumptions may limit their ability to engage in, and benefit from, learning opportunities.

Pupils may believe that lack of ability is the reason that they have experienced failure or setbacks in school and that this lack of ability stems from their SLC difficulties. Therefore, there is little that they can do to improve matters depending on the beliefs they hold relating to the nature of SLC difficulties, and how permanent these difficulties are perceived to be. How pupils attribute success and failure seems a crucial factor in understanding how their beliefs influence their learning behaviours. Pupils may believe that success is very hard to achieve, based on their past learning experiences. Performance avoidance goals may then stem from their desire to avoid further failure putting intrinsic motivation and outcomes at risk because of the anxiety they bring with them into the classroom. If pupils approach learning opportunities with the aim of avoiding failure, negative consequences could be expected.

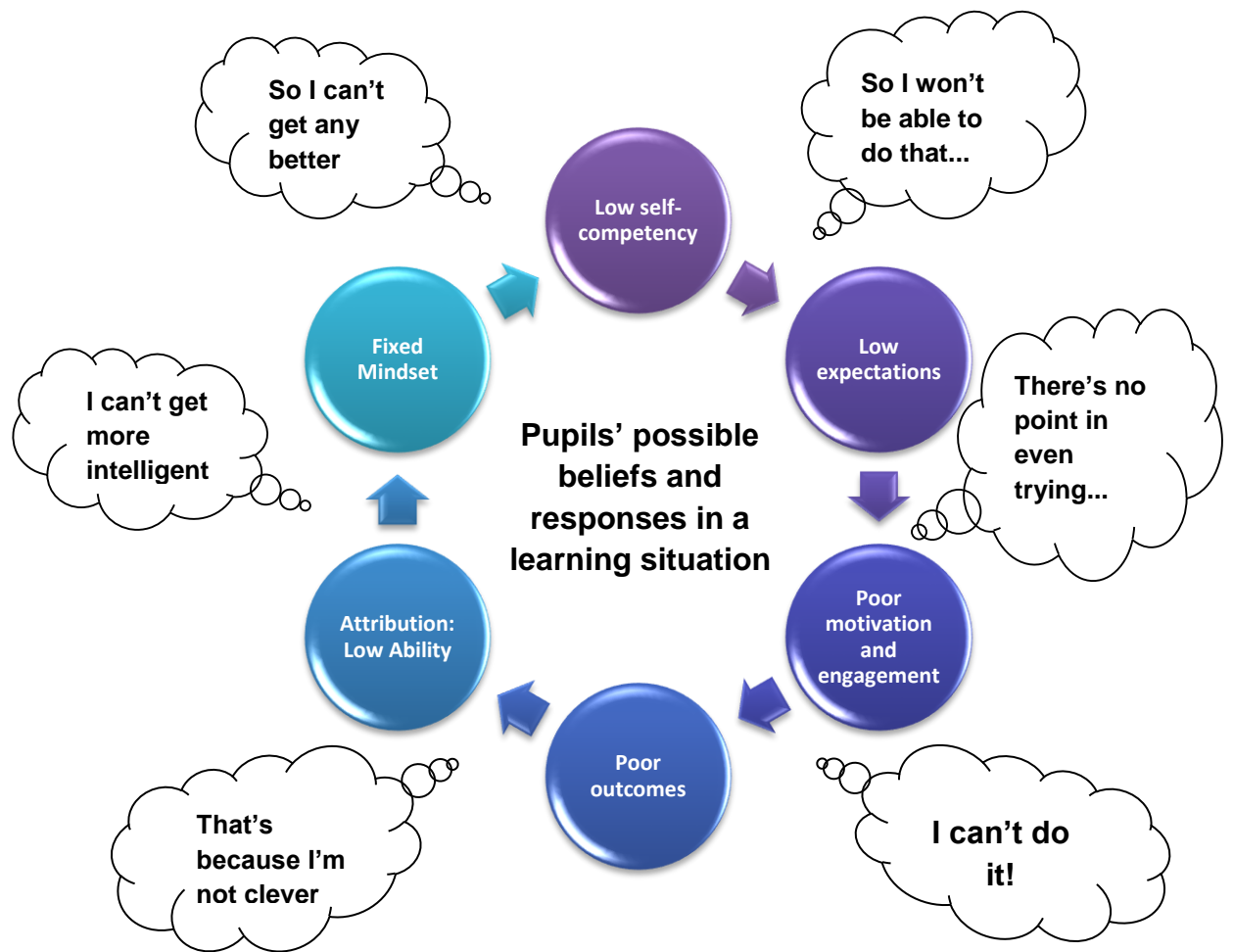
If self-beliefs and attributions have an influence on individuals' achievement motivation, the identification of those who tend towards 'fixed' or 'growth' beliefs may make it possible to predict who might display approach or avoidance attitudes towards performance goals. An individual, engaged in a performance goal with permanent ability concerns, could develop heightened anxieties about failure because of the negative self-evaluation that poor performance would imply. These anxieties may lead an individual to focus on avoiding demonstrating incompetence, and, as a result, they may be more likely to adopt avoidance strategies such as self-handicapping behaviour (choosing to sacrifice success in order to avoid possible failure) (Elliot and McGregor, 1999). If pupils in this study

have permanent beliefs regarding their ability then they may not be as effective learners as they could be. However, identifying these pupils appears to be only the initial step; in order to become more effective learners these pupils may benefit from having their self-beliefs about intelligence, learning and their abilities challenged, to encourage them to move from a fixed to an incremental mindset.

Helplessness in learning situations is something that I have directly observed within my practice in school where many pupils appear to have low self-esteem (both in terms of self-worth and self-competency) and do not seem able to remain resilient in the face of difficulties or setbacks. Many pupils seem willing to give up if activities become challenging and wait for help to be offered, rather than persist or proactively seek support in order to continue learning. Compared to persistent children, helpless children take less responsibility for the results of their behaviour and place less importance on the role of effort in achieving success. As Dweck (1975) states, helpless children demonstrated “a clear tendency to avoid failure,” while persistent children show “a tendency to strive for success.” (pg. 680)

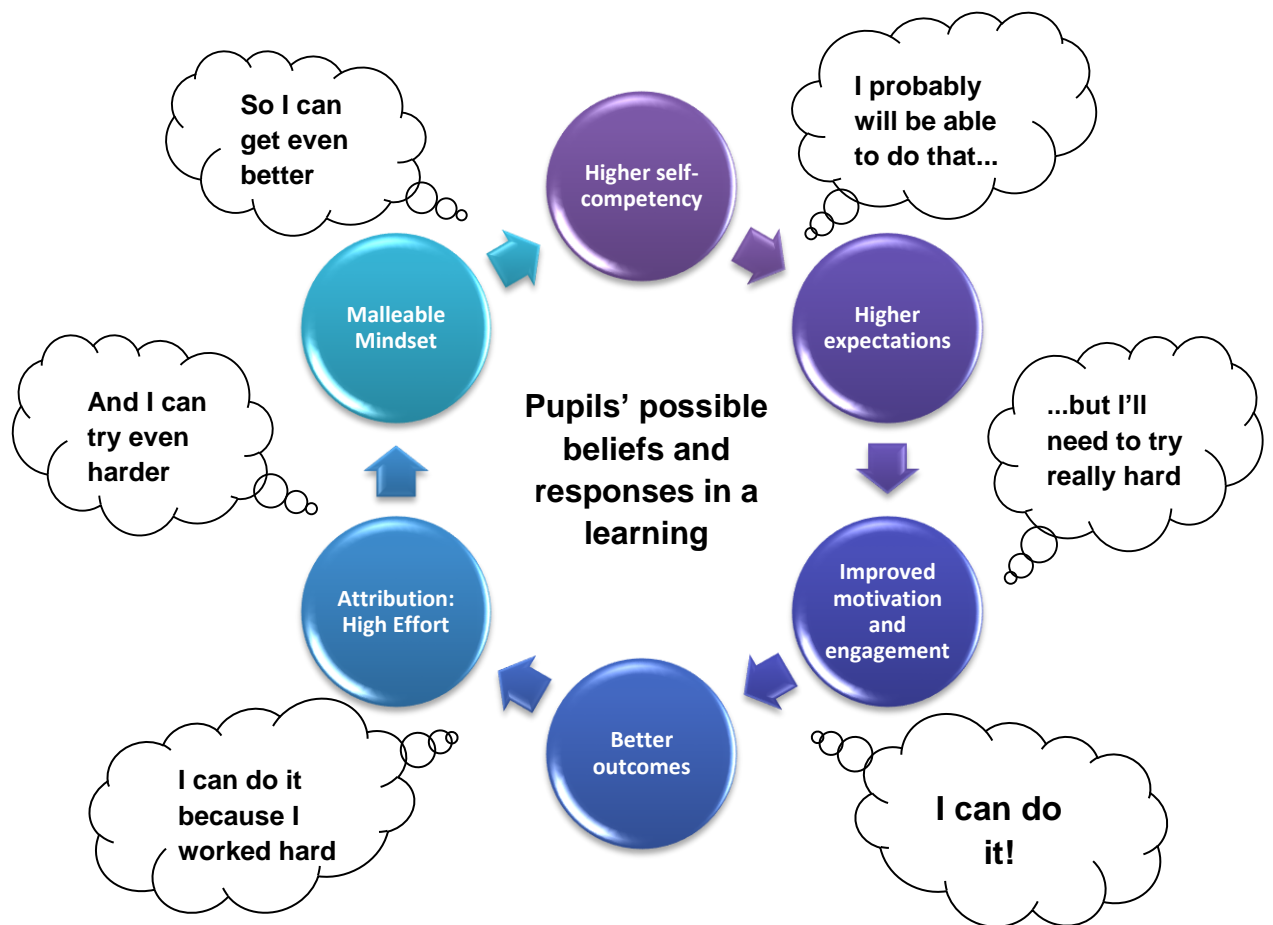
The pupils I work with may benefit from improving their personal resilience to difficulties and becoming more persistent in the face of challenge. Researchers have found that it is possible to challenge children’s self-theories and, as a result, change their learning behaviours. I wish to explore whether it may be possible for this to occur with pupils with SLC difficulties.

Figures 6 and 7 illustrate this.



**Figure 6 Pupils with fixed mindset beliefs and possible outcomes**

Figure 6 highlights how holding a fixed mindset may lower self-competence beliefs and lead to less effective learning behaviours. By focussing upon pupils' beliefs about the nature of intelligence, moving the focus from the perceived critical importance of their innate ability, it may be possible to improve self-competence beliefs and improve learning behaviours, as Figure 7 illustrates overleaf.



**Figure 7** *Pupils with incremental mindset beliefs and possible outcomes*

## 2.7 Conclusion

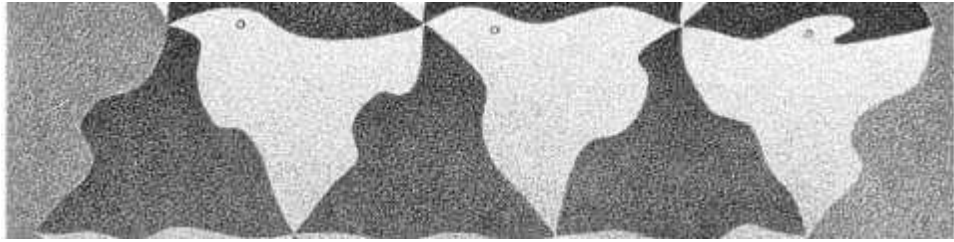
In this literature review I have described and evaluated the research base related to self-beliefs, self-theories of intelligence, learning and learning behaviours. Although the research base is extensive, there is little that considers the impact of a label of SEN on the self-theories and learning beliefs of pupils. Specifically, pupils with SLC difficulties are not considered. However, it seems possible that these pupils may be more likely to have developed fixed mindset beliefs because of the possibly fixed nature of the label SLC difficulties.

In attempting to pursue my research, I acknowledge there is a personal 'reality' to the SLC difficulties experienced by each individual, and that labels used to describe these pupils' needs may be useful in some situations. In this study, I want to explore how the impacts of these difficulties are understood by the individuals themselves and how this affects their understanding of learning, their perceptions of intelligence and their ability as learners. I suggest that pupils' self-concept (their beliefs about themselves) and self-esteem (how these beliefs make them feel about themselves) may influence their self-theories. Pupils in this study may have experienced prejudice and/or discrimination and may have been subjected to processes which make it more likely that they have fixed beliefs about the nature of their abilities, possibly leading to limited expectations of themselves.

Chapter 3 presents the research process I used to explore if self-theories research is applicable to pupils with SLC difficulties. It describes how I have undertaken my research and considers issues relevant to research with children with SEN, describes and explains my decisions and discusses the methods and approaches taken to data collection and analysis.



## **CHAPTER 3: THE RESEARCH PROCESS**



*“...the colour contrast between them increases ... individuals begin to emerge.”*

### **3.0 Introduction**

Chapter 1 set out the methodology of this study and my researcher's stance. I used qualitative methods of data collection with a range of different strategies that were designed to allow pupils to respond and have their contribution heard and valued in a variety of ways. The purpose of this was to give 'due weight' to the participants; this is considered appropriate when conducting research with children (O'Kane, 2000; Farrell, 2005; Morrow, 2005). This is an area of particular importance given the nature of the participants' reported SLC difficulties. Before outlining the process of the research, it is important to consider some of the issues involved in researching with children and, in particular, with 'disabled' children as this will provide a context for some of the decisions I made.

I planned this research as an exploratory case study series bounded by time, context and activity. This chapter focuses on the processes involved and includes consideration of data collection and analysis, and ethical considerations.

### **3.1 Enabling Participation**

The process of seeking children's views is generally problematic (Hobbs, Todd and Taylor, 2000). However, a range of approaches continue to be developed (Armstrong, 1995). In order to explore the applicability of self-theories research to pupils with SLC difficulties, I needed to consider how I could capture the participants' perceptions as effectively and authentically as possible. As my participants are children with SLC difficulties, I consulted a wide research base in order to ensure that I made informed decisions. The following section explores and explains my choices.

#### ***3.1.1 Children's Participation in Research***

Research had been criticised for conceptualizing children as incompetent, unreliable or as objects to be studied (Hill, Laybourn and Borland, 1996). Children rarely had the opportunity to speak for themselves and their lives were largely explored through the responses of adult proxies (Christensen and James, 2000). This may stem from thinking that children are less able (Mahon, Glendinning, Clarke and Craig, 1996), or that they have "limitations of language and lack of articulateness" (Ireland and Holloway, 1996; pg. 156). Consequently, there is growing interest in developing participatory research methods (Brannen and O'Brien, 1995; Mayall, 1994) and growing acknowledgment of the principle of children's participation (Hill et al., 1996). Research has adopted the premise that children are competent witnesses to share their perspectives of their experiences of their worlds (Hood, Kelley and Mayall, 1996; James, Jenks and Prout, 1998). This focus has also led to new ways of engaging with children, characterised by 'negotiation not imposition', to develop research strategies that are 'fair and respectful' to children as participants in, rather than as objects of, research (Hill

et al., 1996; Morrow and Richards, 1996). Conceptualisation of children as agents in their own worlds provided the momentum for researchers to conduct their work 'with' children, and accept that children could be more than participants in research - they could be co-researchers (Jones, 2004; Nieuwenhuys, 2004). However, it is possible to criticise the tokenism of some of this participation, the level of adult manipulation, the unequal power relations between child and researcher and the adult focus of this research (e.g. Gallacher and Gallagher, 2008). As it is adults who frame the research questions, choose the methods and control the analysis, it is arguable that children are unequal partners. However, the promotion of children as researchers in their own right, acknowledges the importance of affording children a voice which is listened to by adults (Alderson, 2000; Alderson and Morrow, 2004; Fielding, 2004).

My research cannot be considered a participatory study as the pupil participants did not choose the research focus, frame the questions, steer the process or control the analysis. In my research I attempted to ensure that the thoughts and opinions of all pupil participants were sought, supported and included. My work is centrally concerned with the authentic elicitation of the participants' voices, as far as this is possible, whilst recognising there are limits to this. For example, Komulainen (2007) warns against an uncritical use of the child's voice by critiquing the tendencies in research to attribute autonomy, rationality and intention to the speaking child, whilst ignoring the production of the child's voice from its interactional context. Komulainen considers each child's voice to be social and co-constructed, and reflects that researchers need to be aware of how children's voices are constrained and shaped by numerous factors, such as

researchers' assumptions about children and their use of language. These issues appear to be particularly relevant in research with children with SLC difficulties.

### **3.1.2 *'Disabled' Children's Participation in Research***

A criticism of some previous research with disabled individuals has been that it either pathologises difficulties, or it is irrelevant to disabled individuals' real concerns (Barnes, 2003; Oliver, 1992). Although disabled adults have become more involved in research over time, the inclusion of children with disabilities has been much slower (Berresford, 1997; Priestley, 1998; Shakespeare, Priestley and Barnes, 2000). Research continues to largely exclude children with severe communication impairments; children communicating using little or no speech are particularly under-represented (Morris, 1998, 2003; Rabiee, Sloper and Beresford, 2005). Adults caring for children with disabilities are often the people included in research, as Shakespeare and colleagues note:

"Most research on disabled childhood has failed to gather the views of disabled children themselves, relying on the perspectives of parents, professionals and other adults. This imbalance has the effect of objectifying and further silencing disabled children" (Shakespeare et al., 2000, pg. 1).

Disabled children, particularly those who do not use speech or well-recognised methods of communication, such as British Sign Language (BSL), are thought to be at risk of social exclusion (Priestley, 2003; Rabiee et al., 2005), within their everyday lives (Sharma, 2002; Watson, Shakespeare, Cunningham Burley, Barnes, Corker, Davis and Priestley, 1999), and within research (Davis, Watson and Cunningham Burley, 2000). The inclusion of disabled children, particularly those with learning disabilities is a particular challenge for researchers (Rabiee et al., 2005). Seemingly underpinned by medical model discourses, children who

do not communicate verbally seem to be defined by what they cannot do, rather than what they can.

Concern also remains regarding ethical issues including informed consent (Cocks, 2006), the suitability of methods (Rabiee et al., 2005), the inclusion of all children (Morris, 2003), and a growing appreciation of the importance of utilising and accepting different communication methods in the research process (Triangle/NSPCC, 2001). As Rabiee et al., (2005) state:

“...the exclusion of disabled children from research and consultation says more about unsuitability of research and consultation methods and adults not knowing how to relate to them than about the limitations on the part of informants. For example, as Argent and Kerrane (1997) have noted, ‘...’they don’t understand’, often means ‘I can’t think how to explain it to them’ (pg. 73)”. (pg. 8-9)

Nevertheless, literature indicates that disabled young people have a wide range of communication strengths, a willingness and ability to communicate their thoughts and experiences and be involved in a process of research and change (Disabled people using Scope services, 2002; Rabiee, Priestley and Knowles, 2001; Morris, 1999; Stalker and Connors, 2003; Watson and Priestley, 2000). A report written by people with SLC difficulties provides interesting information and insight into their communication impairments (Disabled people using Scope services, 2002). Whilst acknowledging their difficulties, they believe they have other qualities that give them communication strengths. As an individual with a communication impairment stated:

“We are used to people saying we cannot communicate, but of course they are wrong. In fact, we have powerful and effective ways of communicating and we usually have many ways to let you know what it is we have in mind. Yes, we have communication difficulties, and some of those are linked with our impairments. But by far the greater part of our difficulty is caused by ‘speaking’ people not having the experience, time or commitment to try to understand us or to include us in everyday life”. (Disabled people using Scope services, 2002, pg.1-2).

An important part of my research was to seek ways to overcome the difficulties and complexities of the participant group, and to find ways of not prioritising the responses of some children, particularly more able communicators, compared with those for whom spoken language is more problematic. For this reason the responses of all the participants are included separately in Chapter 4 to avoid some responses 'drowning out' others. I considered this to be vital so that every pupil is present and represented authentically, as individuals, in this research.

### **3.1.3 *Creative Methods***

Potentially, pupils with SLC difficulties are not only less likely to be able to express themselves verbally but, also, seeking and capturing their thoughts and views on paper may be challenging. Therefore, I considered the use of creative methods in order to possibly minimise the impact of pupils' SLC difficulties on their engagement within the research process. Qualitative researchers have shown increasing interest in creative methods as a potential way to move away from the limitations of talk-based methods. For example, Gauntlett (2005) argues that interviews and focus groups do not provide participants with "the opportunity to express themselves creatively" or "to significantly affect the research agenda" (2005; pg. 2). I considered this to be worthy of consideration given the nature of the pupils' SLC difficulties. Creative methods typically, although not exclusively, use visual means of representation, such as drawings, photography and video (Buckingham, 2009). These methods are believed to enable participants to express themselves and share their views more directly, with less contamination or interference from the researcher. However, it can be argued that they do not necessarily provide ready access to participant perceptions and experience. Although visual methods may encourage participation and generate interest, all

research data needs to be analysed in terms of the context in which it is gathered, the relationships between the participants and the methods (whether linguistic or visual) that the researcher employed. Therefore, it is arguable that visual or creative methods are not uniquely placed to give participants a 'voice', as any presumed communication is dependent upon the interpretations of the researcher. The inclusive and ethical dimensions of the research process do not only draw from the methods used, but are a function of the wider social contexts in which the research is conducted, distributed, understood and used (Buckingham, 2009). Methods can allow participants to respond, but what is communicated or revealed through their participation is likely to vary according to the method employed, the context, the questions posed and how the researcher interprets and understands what they hear and see (Silverman, 2013).

In order to include and work with the pupils, I considered it necessary to use a variety of techniques to capture an account of pupils' perceptions before, during and after the intervention based on self-theories research (e.g. Dweck, 1999). Therefore, my research was conceived as an exploratory case study with multiple data collection procedures being used to gather information over a sustained period of time (Creswell, 2003).

The following section provides details of the research process.

### **3.2 My Research Process**

Case study methods are particularly useful for research into complex issues, and can be considered robust, particularly when a holistic, in-depth investigation is required, such as in my research. I chose a case study approach as I felt that it would most effectively allow me to represent the participants and the school

context. Table 1, overleaf, provides an overview of the research process including all intervention and data gathering elements.



<b>Autumn Term 2010</b>	<b>Spring Term 2011 First half term</b>	<b>Spring Term 2011 Second half term</b>	<b>Summer Term 2011</b>
<p>Staff training day including:</p> <ol style="list-style-type: none"> <li>1. 'Mindset' (Dweck and colleagues' self-theories research findings)</li> <li>2. Investigating Dweck's 'Brainology' website, and modifying the approach for use with Peachtree School pupils. (Schools can buy into this website to help pupils develop 'growth' mindsets)</li> </ol> <p>University insurance and ethics granted.</p>	<p>Pupil and staff participants recruited from the KS4 speech and language class.</p> <p>Informed consent sought and received from staff, parents and pupils involved in the study.</p>	<p><b>The Intervention</b></p> <p><b>Weeks 1 – 6</b></p> <ol style="list-style-type: none"> <li>1. Weekly 'Brain Buzz' sessions based on 'Brainology' website (45 minutes × 6 weeks).</li> <li>2. Three maths lessons (Weeks 1, 3 and 6) videoed and then watched back by pupils, (also video recorded).</li> <li>3. Daily 'Learning Logs' completed at the end of each day reflecting on the learning that day.</li> <li>4. Staff reminded to use goal setting and praise based on effort in lessons, rather than praise based on outcome.</li> </ol>	<p>All data transcribed and analysed using thematic analysis to highlight trends, themes, similarities and differences.</p> <p>Writing up of the thesis begins.</p>
		<p><b>Data Gathering</b></p> <p>Tape recorded semi-structured interviews (based on questions from Dweck's questionnaire) with:</p> <ol style="list-style-type: none"> <li>1. Involved pupils</li> <li>2. Involved staff.</li> </ol> <p>Transcription of the first tape recorded interviews completed and checked with participants for intended meaning.</p>	

**Table 1 An overview of the research process**

Case study research commonly aims to find answers to one or more questions which begin with "how" or "why" and considers a limited number of events or conditions and their inter-relationships. With these aims in mind, I developed the following questions in order to focus enquiry on the applicability of self-theories research to pupils with SLC difficulties:

*How might pupils described as having SLC difficulties understand 'learning'?*

*How might pupils described as having SLC difficulties perceive 'intelligence'?*

*How might pupils described as having SLC difficulties perceive their ability as learners?*

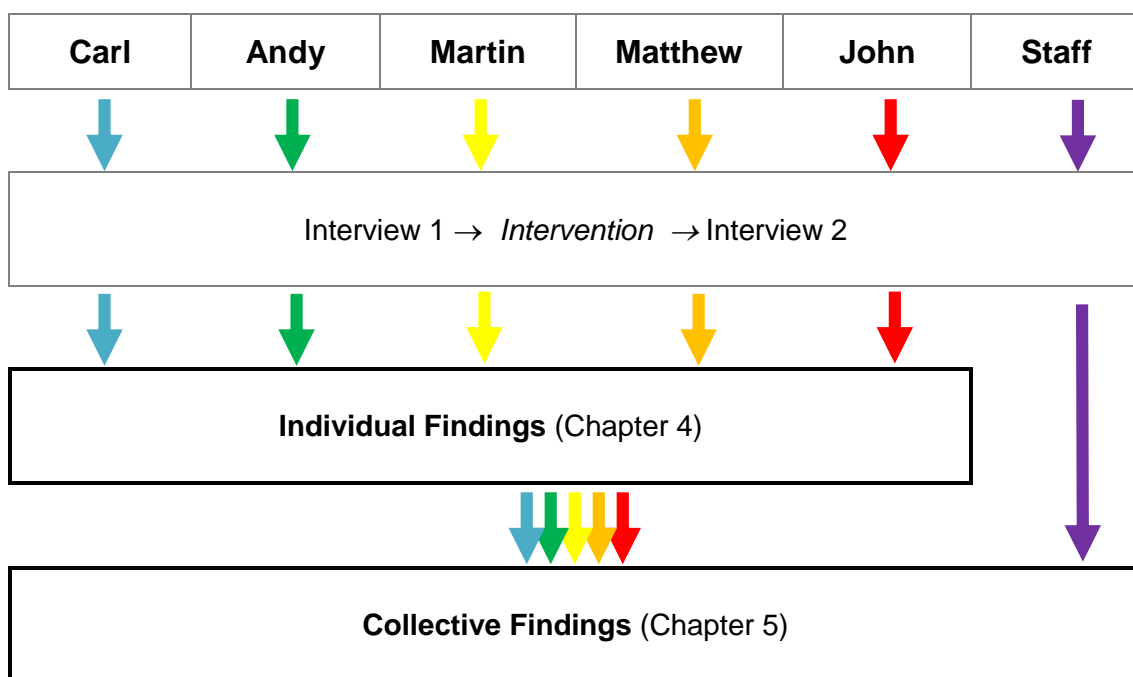
*How might an intervention based on self-theories research affect these pupils' learning and ability beliefs?*

To explore these questions, I chose a group of KS4 pupils together with their class teacher and SaLT. I initially identified six cases, which became five when one pupil became unwell and missed too many sessions to be included in the findings (although she remained part of the group). My research initially aimed to examine the pupils as separate cases within a single case series, involving replication of a single case design across several individuals, gathering multiple viewpoints. I considered that each pupil was distinct from the others in ways that made integrating and presenting only collective information potentially misleading. I wanted to avoid treating the pupils as a homogenous, identical group, because of their SLC difficulties label. This appeared to often have occurred in other research which reported combined findings (e.g. Lindsay and Dockrell, 2000). Both Stake (2005) and Creswell (2007) state that having two or more case studies will provide in-depth theoretical analysis through comparison

and contrast of the findings. They also suggest that using more than one case study will raise awareness of the complexities of the research, leading to a richer understanding of the issues. Yin (2003) also suggests that a series of cases often presents a compelling picture. Therefore, this study employed a case series design with the study's aims focused on individual understandings, with two main phases of enquiry conducted, before and after an intervention based on Dweck and colleagues self-theories research. Chapter 4 presents the individual cases.

Following the analysis of each separate case, I decided to draw the threads together to consider the group as a whole, changing the emphasis from each individual to that of the intervention. When considering the group, I also chose to include the comments of involved staff, as I believed that this might help me to address the fourth supplementary question and, as a result, shed light on the main research question. In particular, I considered that staff feedback may provide insight into any behavioural changes evident in lessons. Dweck and colleagues (for example, Dweck and Elliot, 1983) report interventions leading to the participants' improved resilience, motivation and effort in lessons. The participants in my study might not notice changes, and they may or may not choose or be able to comment. Whereas staff may be able to observe and report any behavioural changes should they occur.

Diagram 8, overleaf, summarises the case study design.



**Figure 8** *An overview of the case study design*

Prior to the intervention, I devised and delivered staff training, summarised in Table 1; this was largely based on the research findings of Carol Dweck and colleagues together with the possible implications of these findings for the pupils at Peachtree School. The training took the form of two 90-minute sessions; the first based on Dweck's research and the second considering Assessment is for Learning (AifL) (see <http://www.sqa.org.uk/sqa/2844.html>). This initial staff training provided a basic level of knowledge of self-theories and Dweck's research to all staff. The training approach consisted of two PowerPoint presentations with video clips and learning breaks imparting basic information, and encouraged staff to reflect on their own practice and plan ways of incorporating these ideas into their everyday work, (see Appendix 2 for a handout of the presentation based on self-theories research).

### **3.2.1     *The Intervention***

The planned intervention, shaded yellow in Table 1, contains several strands to ensure that key concepts from self-theories research were reinforced. This was based on my knowledge of the participants and advice from involved staff. The intervention included six sessions based on the 'Brainology' website, (<http://www.brainology.us>), the daily completion of 'Learning Logs' and the video recording and watching back of three maths lessons. To achieve in-depth exploration, Yin (2003) and Tilden, Charman, Sharples and Fosbury (2005) support the use of various methods of data collection within case study research. I will now consider each aspect in turn.

#### **3.2.1a   *'Brain Buzz' Sessions***

The 'Brain Buzz' sessions were based upon the 'Brainology' website. Following consultation with involved staff, this website was deemed unsuitable as a method of directly delivering the concepts important to the study to this pupil group. This was mainly due to the pace of the sessions, the strong American accents of the characters, the pace of the spoken language and the vocabulary within the presentations, used without additional explanations. The key ideas were believed to be largely appropriate, but the method of delivery would need to be re-considered with reference to the pupils in this study.

Because of this, a series of six 45-minute sessions were developed and delivered by the class teacher to the participants, one each week. Each session involved the teacher talking about a particular aspect of brain function, learning and mindset, and then taking the pupils through a reflective exercise focusing on their own learning experience, and relating it to the work focus that day. These

sessions (see Appendix 3) were nicknamed 'Brain Buzz' sessions by involved staff and pupils.

Staff were encouraged to use the ideas covered in the 'Brain Buzz' sessions throughout each week, in order to reinforce the concepts and encourage the pupils to become more aware of their learning, rather than focussing on their activities during the lesson. In order to facilitate this, the staff also encouraged the pupils to reflect on their learning by keeping a daily learning log.

### *3.2.1b Learning Logs*

During the intervention, towards the end of each day, staff asked each participant to complete a 'learning log' using a writing frame which began "Today, I learned..." (see Appendix 4 for examples). The purpose of this was to give pupils the opportunity to reflect on their learning and, hence, become increasingly aware of the nature of learning and their own capacity to increase their knowledge, skills and understanding.

Pupils completed their daily learning logs individually. Staff did not ask the pupils to discuss as a group because of possible organisational difficulties, and because certain pupils might have gained more attention by dominating and possibly supplanting ideas in the minds of less confident or more passive pupils. Completing the logs individually appeared to offer opportunities for each pupil to personally reflect, consider their learning that day and write down their thoughts. Staff support was available for help with writing, spelling and to discuss the pupil's ideas as required.

The learning logs were collected following the research intervention period, and considered as a possible data source to help address the research questions. It

became evident that some pupils had found completing the logs difficult, particularly with structuring their writing and spelling. Also, I was concerned that staff had helped the pupils complete their personal reflections. If this were true, then I might not be considering the pupils' words, but the staff's interpretation of the pupils' words or, in some cases, the staff's own reflections. For these reasons the data collected from the 'learning logs' was not analysed further. However, it formed a possibly important part of the intervention.

### *3.2.1c Video Recorded Lessons*

My rationale for the use of video was that it would provide visual evidence of the pupil's learning, and provide an opportunity for them to observe themselves working in class and, therefore, offer proof to them of their own ability to learn. Also, I knew that some researchers considered the use of video as a visual research method to be more readily accessible and possibly more inclusive than other methods (see section 3.1.1); I also decided to use video in case some participants struggled to respond in the semi-structured interviews.

Three mathematics lessons were videoed over the six-week intervention period. These lessons were chosen on the basis of timetabling restrictions when the pupils selected as part of the case study would be working together. Maths lessons also appeared to provide clear outcomes that are generally recognisable as right or wrong. I assumed that pupils would be able to clearly observe themselves learning when they watched the videos, as they would see themselves getting correct answers to their teacher's questions. I considered that 'number' based maths lessons would provide particularly effective examples of a 'correct answer' demonstrating the learning that occurred during a lesson.

However, this assumes that getting a correct answer demonstrates learning and also implies that the learning occurred during the lesson, which is not necessarily the case. Reflecting on these assumptions now, I consider that it was naive of me to assume that the pupils watching themselves on video getting the teacher's questions correct in lessons, provided evidence to them of learning. Actually, this only provided evidence of getting answers right (or wrong). Interestingly, teachers (and the present school inspection framework) also appear to make this assumption. However, learning may happen at any time and, although it may be demonstrated in a lesson, it is erroneous to assume that this means the learning has occurred because of the teaching during that lesson. In addition, answering questions correctly might provide evidence of learning, but not about the nature of that learning. For example, does a correct answer provide evidence that a concept has been integrated or linked within the totality of a pupil's mathematical knowledge, or is it just evidence that an isolated 'trick' has been mastered?

A maths lesson was taped during weeks one, three and six, before, during and after the six weekly 'Brain Buzz' sessions. The entirety of each of the maths lessons was videoed by a camera placed at the back left-hand corner of the classroom. The camera was pointed towards the pupils and their teacher. Consent was sought from pupils who were aware of the video camera and the reason for its presence. Following each lesson I edited the video, choosing to focus on the most interactive aspects of the lesson on the basis that this may be more interesting to the pupils. I also made an assumption that watching an hour long lesson would not maintain the interest of the pupils when they watched it back.



The edited lesson was then played back to these same pupils on the following day, in a different room, on a large interactive whiteboard. A video camera placed in front and to the left of the pupils watching the video, recorded their responses to watching themselves within the maths lesson. The experience of watching themselves in class was part of the intervention. However, recording them watching themselves was conceived as a data source. The resulting footage was then transcribed in its entirety (see Appendix 5 for an example).

However, the video playback of the maths lessons was problematic for a number of reasons. In lesson one the pupils watched the video of themselves in the lesson passively, with few comments or physical reactions. As a result, the video transcript data, although interesting, did not appear to provide information that assisted in answering the research questions. During the first lesson playback, I did not stop the video to ask questions or to allow pupils to respond; I felt that this had been a mistake. The pupils appeared to be so busy watching themselves that their comments were often very brief and did not offer much in the way of opinion, comment or explanation. I felt this was because the expected behaviour, when watching television or any video, was to watch it attentively and quietly. However, the pupils' compliant behaviour was actually getting in the way of dialogue. Therefore, during the second and third video observations, I decided to stop the video playback at regular intervals which allowed many more opportunities for pupils to make comments, or ask questions or express their thoughts. This produced more interaction but required more time for the playback session.

I decided that the data I obtained from this aspect of the intervention was unreliable for a number of reasons. Firstly, the choices I made when editing the

video of the original maths lesson, and the decisions about when and for how long to pause the edited video may have influenced the comments made by the pupils. Also, 'forcing' feedback by stopping the videos and asking questions focussed on my research questions meant that the feedback was not 'free'. For these reasons, the data collected as a result of the videoed lessons was not analysed further. However, this aspect of the intervention was included and discussed as it may have formed an important aspect of the intervention overall and may have influenced the pupils in some way although the resultant data was rejected.

### **3.3 Data Collection**

This section explains how I decided to collect the data that was needed to answer the research questions. My 'data corpus' (all the data I collected within the research process) consisted of interview transcripts, video transcripts and written learning logs. However, as previously discussed, my 'data set' is smaller (the data from the corpus that I have chosen to analyse for this particular study) (Braun and Clarke, 2006). My data set consists of interview transcripts from semi-structured interviews with both pupils and staff before and after the intervention (shaded blue in Table 1).

Prior to the data collection process, I made the decision not to pilot the data collection tools. As the pupils at Peachtree School are individuals with their own strengths and weaknesses, piloting the data collection tools with other pupils would not necessarily have offered any information regarding their suitability for the participants in the study. Furthermore, an important aspect of my research was the exploration of how to include my participants and how to enable them to engage in and respond to the research process. If the pupils had difficulties

responding to engaging in the research process, that was important information to be discussed within my research.

### **3.3.1 *Semi-structured Interviews***

#### **3.3.1a *Pupils***

In order to explore if self-theories research is applicable to pupils with SLC difficulties I needed to capture pupils' perceptions of learning, intelligence and their ability as learners. To do this, I engaged the pupils individually in semi-structured interviews, before and after the intervention. Here I attempted to ask and "formulate questions and provide an atmosphere conducive to open and undistorted communication" (Holstein and Gubrium, 1997; pg 116, in Silverman, 2001). I carefully worded the interview questions to enable maximum participation and communication (Appendix 6). The questions, including three based on the same questionnaire Dweck used within her research, were asked to gather information relevant to my research. I had decided that questioning would be verbal, without the use of visual aids to support understanding. Offering written questions would be challenging for the pupils to read and, therefore, might have inhibited the flow of the interview. Using sign or symbols would not be possible without significantly altering the content of the questions. Also none of the participants routinely use signing or symbols to augment their communication; therefore, this addition would not mirror their normal experience of questioning or communication in school. If necessary, questions were rephrased and explanations were added to support each pupil's understanding and ability to respond. These interviews were transcribed in full (see Appendix 7 for an example).

### *3.3.1b Staff*

Involved staff were also interviewed twice, individually, on the same days as the pupils. Identical initial questions were asked of staff, but they were then asked additional questions relating to their pupils rather than questions regarding their own intelligence, learning and ability beliefs. These interviews were also transcribed in full (see Appendix 8 for an example). Staff feedback and their responses were analysed and contribute to the collective findings in Chapter 5.

## **3.4 Data Analysis**

Basit (2003) describes the process of analysing qualitative data as difficult, dynamic, intuitive and creative. It involves “working with data, organizing it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and what is to be learned, and deciding what you will tell others” (Bogdan and Biklen, 1982, pg. 145). For these reasons I decided to use thematic analysis to explore and make sense of the data I had collected. I did this to meet my primary goal of generating understanding of the participant’s responses in their interviews.

Thematic analysis is widely used, but there is no agreement about what it actually is or how to go about doing it (for example, Attride-Stirling, 2001; Boyatzis, 1998). Braun and Clarke (2006) provide an explicit method for thematic analysis which I decided to adopt. Before beginning, I needed to decide whether to use inductive or theoretic thematic analysis and whether to seek semantic or latent themes. Thematic analysis can identify patterns or themes within the data in two ways: using an inductive (‘bottom up’) approach (e.g. Frith and Gleeson, 2004), or using a theoretical or deductive (‘top down’) approach (e.g., Boyatzis, 1998). As I coded

for specific research questions based on a known research base, I chose the theoretical approach.

I also needed to decide at which level to identify themes: at a semantic, explicit level or at a latent, interpretative level (Boyatzis, 1998). As I appreciated that the themes I identified primarily stem from Dweck's and colleagues' self-theories research, my analysis was at the semantic level. My findings are based on the semantic content of the data leading to interpretation and consideration of any broader meanings and wider implications. After conducting thematic analysis on the interview data, I summarised the findings in thematic mind-maps.

### **3.4.1 Producing the Thematic Mind-maps**

To produce thematic mind-maps and present findings, I used a six stage process of thematic analysis. The first five stages are based on the method used by Braun and Clarke (2006). I added stage six to help develop my argument; it provides a link between the thematic analysis and the findings in my study. Table 2 summarises the process.

<b>Stage 1</b>	<i>Reading/re-reading the transcripts ~ becoming familiar with the texts</i>
<b>Stage 2</b>	<i>Generating initial codes ~ linking to the research questions</i>
<b>Stage 3</b>	<i>Searching for themes ~ sorting the coded data into potential themes</i>
<b>Stage 4</b>	<i>Refining the themes ~ starting to develop thematic mind-maps</i>
<b>Stage 5</b>	<i>Defining the themes ~ creating the final thematic mind-maps</i>
<b>Stage 6</b>	<i>Developing an argument ~ illustrating and supporting the findings</i>

**Table 2**    *The thematic analysis process*

*Stage 1 Reading/re-reading the transcripts ~ becoming familiar with the texts*

In this stage, by immersing myself in the data, I became familiar with the content of the texts. I transcribed all responses onto coloured 'post-its' (a different colour for each pupil) and read and re-read them, actively looking for patterns and semantic meanings.

*Stage 2 Generating initial codes ~ linking to the research questions*

At this stage, I generated initial codes from the texts. These codes identified the features I was interested in; for example, comments relating to ability, intelligence or learning. The 'post-its' were placed upon a wall in sections to delineate which participant made comments related to each theme. At this stage I also placed a number of 'post-its' in a 'yes/no' and a 'don't know' holding place to be considered further later.

*Stage 3 Searching for themes ~ sorting the coded data into potential themes*

In Stage 3, I sorted the coded data into possible themes. These were created by comparing responses and considering my interpretation of pupil's meaning. I then organised these themes into a provisional structure. I placed the 'post-its' in sections on the wall according to their themes and then read and re-read them whilst listening to the interview recordings. I did this to check that the meaning and themes I was assigning were, in my opinion, accurate (see Appendices 9, 10 and 11).

*Stage 4 Refining the themes ~ starting to develop thematic mind-maps*

At this point, I attempted to refine the themes identified in Stage 3. Themes which lacked convincing support were discarded or combined with others. The

distinction between themes was reassessed as some overlapped substantially. I found that some aspects of some utterances were difficult to separate and others reflected more than one theme. I made my final decisions based on which theme seemed more convincing at that time. Themes were refined in the light of the whole data set. This was an iterative process. I began the process of creating thematic mind-maps as a means of summarising the themes and showing how they fitted together.

#### *Stage 5 Defining the themes ~ creating the final thematic mind-maps*

I commenced this phase by attempting to work out which aspects of the data each thematic mind-map captured. At the same time, I attempted to clarify the essence of each of them. Following Braun and Clarke (2006), I did this by going back to the data extracts and the 'post-its', I refined their organisation and interpreted and described my view of what they meant. My description involved a detailed break-down of each theme into its elements. At this stage, the 'post-its' were moved to reflect the themes and relationships and they were then captured within three tables (Appendices 9, 10 and 11). This method allowed the themes to be apparent but also for each child's responses to remain distinct. Following this, the thematic mind-maps were expanded, modified and finalised.

#### *Stage 6 Developing an argument ~ illustrating and supporting the findings*

Following the completion of the thematic mind-maps, I began the process of writing up my research. I identified and articulated an argument and converted the fundamental features of my findings into written analysis and discussion. I selected extracts of data from the texts to illustrate my identified themes. I used

only the original transcriptions and the analysis and interpretation captured in the thematic mind-maps to produce my final written account.

### **3.5 Ethical Procedures**

Groundwater-Smith and Mockler (2002) suggest that ethical rigour should be one of the “three basic tests” of quality in education research, alongside triangulation of data and inter-subjective verification (pg. 4). Within my research I adhered to the code of ethics set by the British Psychological Society (2009). Evans and Jabucek (1996) state, that the key issue in research with humans is consent. They acknowledge the tension between the rights of the individual to privacy and the public's right to know. Consequently, I contacted parents/carers by letter to request their consent for their child's involvement. The letter and information sheet contained details of how each child would be involved in the study and what would happen to any evidence that was collected, a web-link to the university ethics code, and my contact details (Appendix 12). Consent letters included an additional request for the children to take part in two taped semi-structured interviews with myself and to be videoed in three lessons; the letters also provided information about how the safeguarding of confidentiality would be observed. Plans were made with staff for alternative arrangements for any pupil where consent was not agreed for their involvement in the videoed lessons or ‘Brain Buzz’ sessions. Tape and video recordings were safely stored in a locked cabinet and, after being analysed, were destroyed. Participants’ names and all other personal information, including the name of the school, have all been changed to preserve anonymity.



The pupil's consent was also sought at the outset and an information sheet was created to inform them of the nature of the research and their role within it (Appendix 14). Their right to withdraw at any stage was stated and clarified. An Ethics-as-Process model (Cutcliffe and Ramcheran, 2002) was used to ensure that there was an ongoing monitoring of each pupil's welfare during the process. In addition, the power relationships between me as an adult, the researcher and teacher in charge, and the children, which may have made it more difficult for them to request to withdraw, was actively monitored throughout.

Hollingsworth (1997) characterises the research relationship as collaborative; this means that, in this case, there was a mutual engagement in the research process with the teachers, the pupils, and me as the researcher working together. Collaborative research is focussed on the relationship between the researcher and the researched. In this study, my position as a senior manager in school creates possible tension and ethical issues and, therefore, it is very important for the identity of the researcher to be acknowledged and, during the research, to allow staff and pupils to choose their level of involvement without concern. No coercion or pressure was placed upon staff or pupils to take part through my position or any presumed 'power'. Although I cannot guarantee that this did not play any part in gaining access to the approval and goodwill of staff, pupils and parents, I did not actively intend this to be the case. I appreciate that my role in school is inevitably attached to the perceptions that the pupils and staff have of me, based on their past experience and their beliefs and constructions of me. I accept that the perceptions others have of me and my role are present in this research. I actively attempted to maintain flexibility of role, based on openness to feedback, which is important within reflexive research.

I also provided a staff information sheet (Appendix 15) in order for staff to have written documentation to refer to and to remind them of their right to withdraw, or have queries or concerns addressed. Furthermore, as this research was designed to avoid any additional workload for staff or pupils, I believe that their willingness to become and stay involved is due at least in part to an interest and curiosity to see what might happen. I consider that my relationship with staff, pupils and parents, within the context of my role, is strong enough to allow them to feel able to express any concerns if they felt the need to do so. However, I accept that this is an assumption based on my perceptions of these relationships.

### **3.6 Reflexivity**

Throughout my research, I attempted to pay close attention to my involvement in all aspects of the process, and I actively tried to assess the impact of this involvement on the research. My own values had a major influence on my choice of research methods and process; conversely, the choices I made have exposed these values. Mathner and Doucet (1997) state the need to document reflexive processes, not just in general terms such as age, gender or ethnic background, but also in terms of how and why particular decisions were made at particular stages. Throughout this study I have included how and why I made my decisions, as I appreciate, in this type of qualitative research, I am part of the research process. The reflexive process of considering my skills, my relationships with the participants and staff together with my responses to what I experienced have been included as part of the research story, rather than being eliminated. I would argue that my observations and interpretations, although subjective, are supported by seeking similar evidence, on other occasions and in other settings,

and by asking participants and staff for their feedback. I will continue to keep reflexivity central to my research and critically evaluate this in Chapter 6.

### **3.7 Conclusion**

My research was designed to explore the applicability of self-theories research to pupils with SLC difficulties. In this chapter I have explored and explained my research process. I acknowledge that the choices I made, including my decision to rely on interview data, will affect findings. Findings at both an individual level (Chapter 4) and collectively (Chapter 5) follow. I will return to critically consider these decisions in Chapter 6 where my findings and the implications of my choices will be explored further.

## **CHAPTER 4: INDIVIDUAL FINDINGS AND INITIAL DISCUSSION**



*“...transformed into white and black birds...” individuals can be clearly seen*

### **4.0 Introduction**

In this chapter five case studies are presented. The findings from each are discussed in relation to the research of Carol Dweck and colleagues on self-theories and the relevance of this to pupils with SLC difficulties. Profiles of the five participants, Carl, Andy, Martin, Matthew and John are provided in Appendix 1.

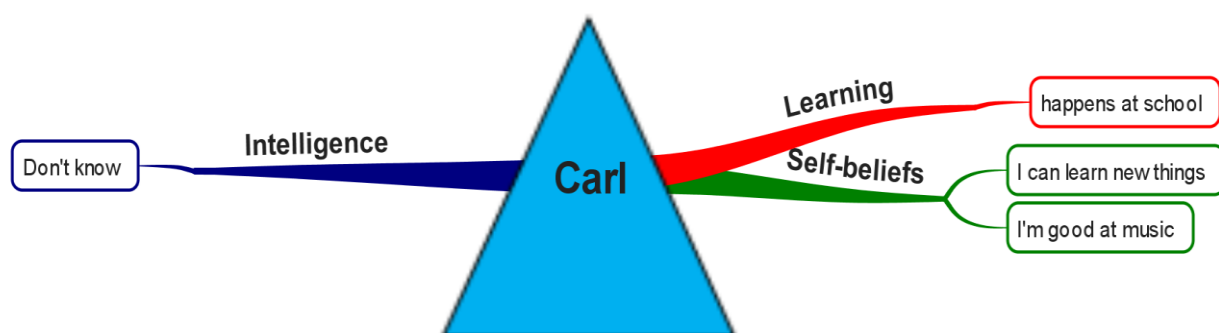
The interviews with each of the participants, both before and after the intervention, were analysed using thematic analysis as described in Chapter 3. I focussed this analysis on both the research questions and research on self-theories, and captured and illustrated the findings from these interviews using thematic mind-maps. These summarise each participant's responses within the three main strands of interest: intelligence, learning and self-beliefs. In these thematic mind-maps, I represented each pupil at the centre as a coloured triangle; the colour of the triangle is relevant when overall findings are explored in Chapter 5 (also see Appendices 10, 11 and 12).

In the following sections I present, discuss and contrast findings both before and after the intervention for each of the case studies. The fourth research question considering the effect of the intervention on pupils' learning, intelligence and self-beliefs is addressed by considering any differences that are evident between responses in the first and second interview. However, in considering this I do not assume or suggest that any changes are a straightforward consequence of the intervention. Furthermore, I restate that this research is an exploratory case study, and my findings only represent my interpretation of the participant's words, with emphasis on seeking to understand the applicability of self-theories to pupils with SLC difficulties.

## 4.1 Carl

In both interviews Carl struggled to answer the questions and was the least responsive of all the participants. This could be due to a number of factors, including Carl being overwhelmed by the language or the situation, or because his SLC difficulties are significant. Little improvement was seen in interview 2 despite the intervention which had regularly repeated the vocabulary used in the interviews. These difficulties are considered further in Chapter 6.

### 4.1.1 Interview 1



**Thematic Mind-map C1** Carl's responses before the intervention

### ***Learning beliefs – How might Carl understand learning?***

Carl's responses suggest that he considers learning to be something that happens at school and is, therefore, context specific. He agreed that it is possible to learn new things but could not add more detail to his answers.

### ***Intelligence beliefs – How might Carl perceive intelligence?***

Carl's responses suggested that he did not understand the word 'intelligence':

*"Don't know. Don't know intelligent."* (C1:8)

[C = Carl, 1 = interview one, 8 = utterance eight.]

Because of his lack of understanding, I offered Carl an alternative word, 'clever', but he still struggled to answer questions about intelligence. This might mean that he does not understand what intelligence means or what it is; alternatively, the vocabulary used in the questions, even reworded, was too difficult for him. This raises issues about the suitability of the method used which is explored in Chapter 6.

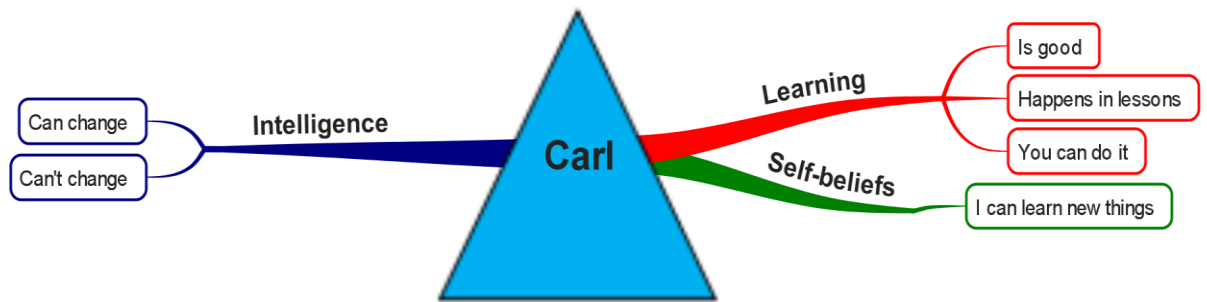
### ***Self-beliefs – How might Carl perceive his abilities?***

Carl could not say whether he was clever and was able to offer only one example of what he was good at:

*"Emm...don't know. Good at... emm ... music."* (C1:30)

He had attended music club before the interview which possibly explains why he mentioned music. Carl could not answer any further questions.

#### 4.1.2 Interview 2



**Thematic Mind-map C2** Carl's responses after the intervention

##### ***Learning beliefs – How might Carl understand learning?***

Carl still considers learning to occur during lessons, but also now considers learning to be a good thing.

##### ***Intelligence beliefs - How might Carl understand intelligence?***

Carl now appeared to believe that intelligence is something that can be changed. However, in further questions he contradicts himself and appears to have become confused. It is possible that his responses do not provide an accurate reflection of his beliefs.

##### ***Self-beliefs – How might Carl perceive his abilities?***

Carl still could not say whether he was clever. However, unlike the first interview he could not give an example of anything he was good at. It is debatable as to whether this is because he genuinely could not think of anything, or because he did not understand the question.

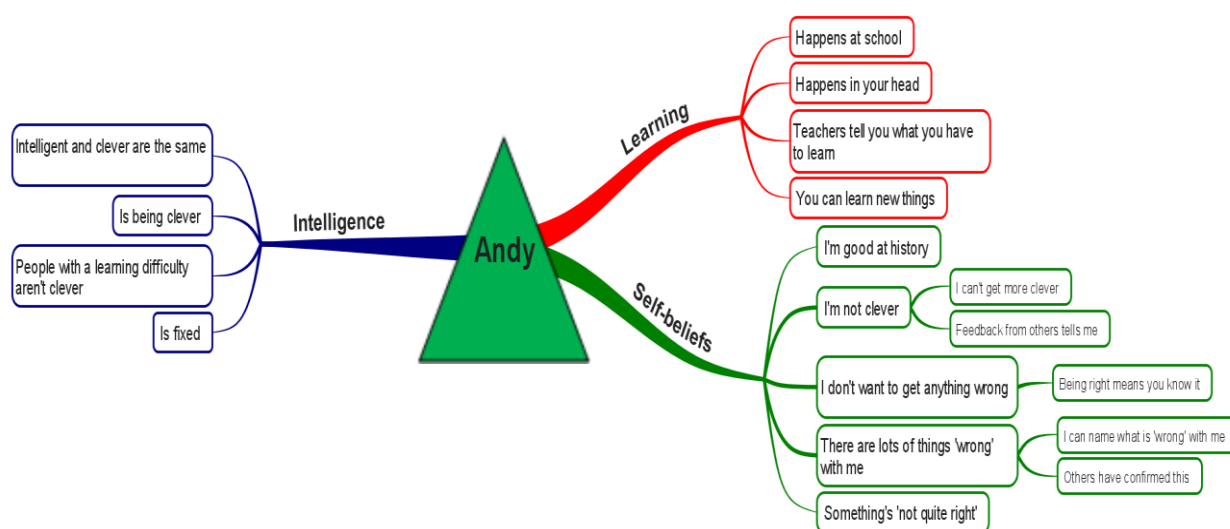
## ***How might the intervention have affected Carl's learning, intelligence and self-beliefs?***

There were few differences between Carl's responses in interview one and two. The nature and severity of his SLC difficulties, particularly his receptive language difficulties, possibly affected his ability to understand and respond to the questions asked. Because of this, it is possible that the methods used did not allow Carl to be included effectively in the study. This raises questions about both the overall suitability of the methods used and Carl's suitability as a participant. These issues are discussed in Chapter 6.

### **4.2 Andy**

Andy's responses in both interviews suggested that he was able to understand the interview questions. He was able to express his views which appeared to change between the interviews.

#### **4.2.1 Interview 1**



***Thematic Mind-map A1 Andy's responses before the Intervention***



### ***Learning beliefs – How might Andy understand learning?***

Andy suggests that learning is something that happens at school:

*“Well...I think learning is when you do things at school and the teachers want you to learn things.... in the lessons and then you learn things and you do things and that’s what learning is.... in your head.” (A1:6)*

He believes that learning happens ‘in your head’ but also that learning is something teachers want you to do. This implies that learning happens as a result of what someone else wants you to learn, placing the power of learning with teachers not within the pupils themselves. Good and Brophy (1972) consider the importance of pupils' perceptions of their acceptance by the teacher and, if learning is perceived as under the control of the teacher, this will influence learning behaviours. Furthermore, if a pupil does not feel accepted by their teacher, then their learning will be adversely affected. My interpretation is that Andy feels accepted by Tom and believes that learning new things is possible:

*“You can certainly learn new things – I know you can definitely learn things. So that’s the right answer.” (A1:22)*

Andy finds it difficult to give an opinion and, instead, seems to search anxiously for the ‘right’ response. He appears to be dominated by his presumption that there is a ‘right’ or ‘wrong’ answer. Dweck’s research (1999) suggests that when individuals are concerned with demonstrating their ability, getting an answer ‘right’ is considered very important, and they are more likely to see failure as indicative of a lack of ability. Such individuals are more likely to experience failure as disheartening and demonstrate a ‘helpless’ response to failure (Elliot & Dweck, 1988; Utman, 1997). This seems directly relevant to Andy. My own observations and those of involved staff suggest that he frequently presents in class with a ‘fear of failure’ and tries to avoid mistakes. He often seeks reassurance or assistance, even when he does not need it, and sometimes gives up.

### ***Intelligence beliefs – How might Andy perceive intelligence?***

Andy suggests that intelligence and being 'clever' are the same although his concern with this being 'correct' implies that he is uncertain.

*"What intelligence is? What is intelligence? Emm... well I suppose it's being a clever person, being clever. Is that right? Intelligent and clever is the same? I think that's the same."* (A1:8)

I then asked him to comment on this statement 'You only have a certain amount of intelligence and you can't do very much to change it?'

*"I think it could be right. It might be right. Intelligence and clever? It is right. I think so."* (A1:10)

SF (Sue Fisher): "Do you know why you think that?"

*"Well....no....no not really."* (A1:12)

This implies that Andy, possibly, views intelligence as something that is fixed, but he is concerned about his answer as he has no idea if it is correct. The fact that he believes there is a right or a wrong answer also suggests that his beliefs are relatively fixed.

Andy agreed that people only have a certain amount of intelligence and that they can't change that amount. He also then interpreted the statement 'your intelligence is something that you cannot change very much' as relating specifically to individuals with a learning disability:

*"Well, if you've got a learning disability than probably no. Do you mean people who have got a learning disability?"* (A1:16)

SF: "I think I mean anybody."

*"Well I think yes maybe. People with a learning disability can't get more cleverer."* (A1:18)

Andy appeared to believe that individuals described as having a learning difficulty couldn't get more intelligent, possibly hinting that individuals without such a

difficulty could or, perhaps, implying that people without a difficulty were already clever. When asked if intelligence is something that can't change, Andy replied:

*"Yes. You can't get more clever from somewhere can you? That's silly. More intelligent?" (A1:20)*

Andy implies that cleverness is not a commodity that you can simply 'get'. Although initially uncertain, Andy concludes that he thinks intelligence is 'fixed':

SF: "Can you change how intelligent you are Andy?"

*"No. Or maybe yes... or no. I think not." (A1:24)*

Andy's responses suggest that he understands intelligence as an innate trait. This might explain why he frequently opts out of learning situations when he fears work is too challenging and he may make mistakes, (Chiu, Hong and Dweck, 1997).

### ***Self-beliefs – How might Andy perceive his abilities?***

When asked how intelligent he thought he was, Andy responded:

*"Not that intelligent. I think not that intelligent. Not clever. Not intelligent. (taps head) Something not quite right." (A1:34)*

Andy's response hints that his personal experience had affected his belief about his intelligence. 'Something not quite right' was said in a way that implied that this had been said to him, and that he was repeating a phrase not originally his own.

When asked if he could get more intelligent, he replied:

*"Emm... maybe, maybe not. How can I? I don't know, maybe." (A1:28)*

*"I don't really know how I can do that. I am not clever so how can I get cleverer?" (A1:30)*

His response suggests that 'being clever' is limited and, therefore, his intelligence is fixed. Andy went on to explain why he believed he wasn't clever:

*"Emm. Well, I have been told that." "By people. I remember people saying that at my last school. My last school was... emm... a lady told me. "Something not quite right" in there." (taps forehead again) (A1:32 & 34)*

Andy's belief in his own intelligence appears to have been influenced by what he can remember an adult saying to him at his last school; he recalls the phrase "*something not quite right*" which he appeared to interpret as meaning that he wasn't clever and accounted for his problems with "*reading and 'social communications ... and concentrating and listening and something else as well.*" This appears to have fixed his belief that his intelligence is low and, as a result, there is nothing he can do to change it. This professional may have acted as a 'significant other' and, as such, possibly held considerable influence over Andy's self-concept (Meeus et al, 2002).

Andy presented with a strong fear of failure and a need to get his work 'right'. When he was asked what he thought intelligence was, he sought reassurance that his answer was correct three times in one response (A1:8). This lack of confidence and low self-esteem was also evident in the maths lesson video footage, where during lesson one he commented on his voice. He struggled to accept that his voice was as he heard it in the video, commenting that it wasn't how he sounded and that he didn't like it.

In the first interview, Andy does not appear to view himself as intelligent and this is a possible factor that makes him anxious to get the answer 'right'. He possibly struggles to offer an opinion not only because he is unsure of the validity of his response, but also, perhaps, because he considers that his opinions hold less value than those of others, who he may consider know the 'right' answer. This hints at low self-esteem which might be caused in part by his memory of the phrase "*something not quite right*" in his head. Believing these words, he could either conclude that his brain was different to others or, more concerning, that any difficulties he experiences are due to a 'sub-standard' brain that he cannot

alter or improve. Andy's self-esteem appears to include low self-competency which Miller and Moran (2006) stress is an important dimension of self-esteem in the classroom.

He also remembered the word "*autistic*" which is the dominant labelling word used to describe Andy and the nature of his difficulties. He appears to understand 'autistic' as "*something is wrong*" and, possibly, that what is wrong is within him, signalling a fixed limitation.

Andy also struggled to state what he thought he was good at:

*"...History ... and making models I think. Mmm...I'm quite a good shot."*  
(A1:42)

SF: "Good shot?"

*"With a gun, yes."* (A1:44)

SF: "Anything else at school Andy?"

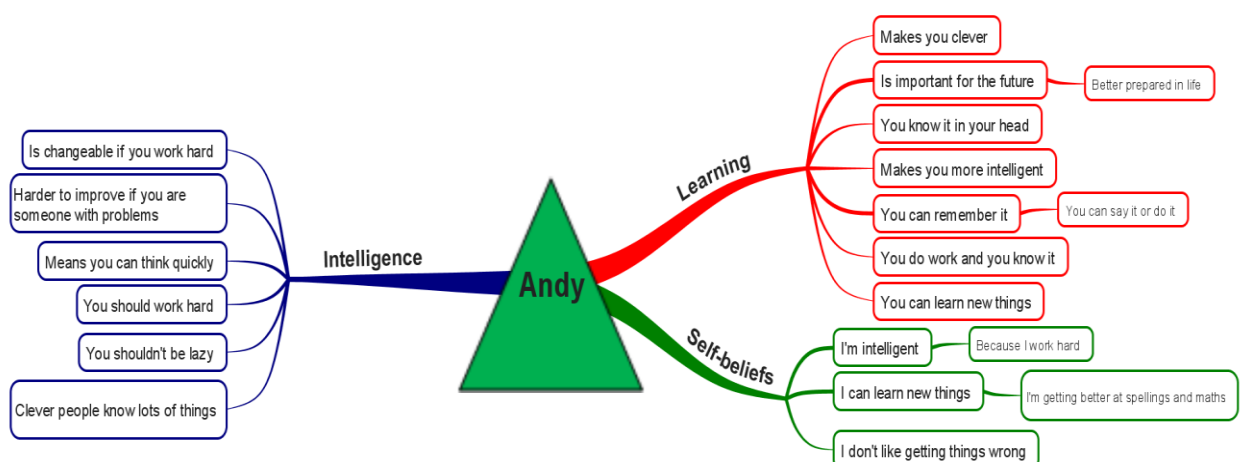
*"No. Nothing else that I can think of now."* (A1:46)

He appeared to think deeply about this question before answering with a subject and a hobby he enjoys (he makes models specifically tanks and aircraft related to World War 2), and a sport he enjoys with his family (clay pigeon shooting). He couldn't think of anything else academic that he felt he was good at, suggesting that he does not feel confident about his academic abilities. This linked with, and compounded by, his fear of failure possibly has a negative effect on his self-confidence and self-esteem at school. The things that Andy considered himself to be 'good at' have clear right or wrong criteria which would help him make decisions regarding his success or failure. His main interest is World War 2 and he enjoys learning facts to recount to others. Similarly, completing models and

shooting clay pigeons have clear outcomes that may help him to interpret and affirm his own success.

Andy spoke of “*people who have got a learning disability*” (A1:16) and he was clear in his opinion that such people could not get more intelligent; this suggests that these words carry limiting judgements to him. Later, he mentions that people told him he was not clever and listed his difficulties ending with the word “*autistic*”. Again, the difficulties and labels he used seemed to suggest that his potential intelligence was limited and he said the word “*autistic*” in a way that suggested that this wasn’t a good thing to be and that it communicated “*that something is wrong*” (A1:40) with him. Just as Medgyesi had suggested “stereotypes shape the way a particular group views itself within the context of the world-at-large” (1996, pg. 44) Andy seems to have developed a view of being autistic and “*people who have got a learning disability*” as defining the essence of these individuals and indeed himself.

#### 4.2.2 Interview 2



**Thematic Mind-map A2**     **Andy's responses after the Intervention**

### ***Learning beliefs – How might Andy understand learning?***

In the second interview, Andy considers learning to be important for the future and links learning to cleverness in his first response:

*“Trying to make you clever for the future.” (A2:2)*

This may suggest that his view has altered from the first interview possibly indicating a shift in Andy’s understanding. He then adds:

*“You are better prepared.” (A2:2)*

This suggests that Andy now links learning to something important in life and for the future. Learning now appears to be something necessary to individuals, not something dictated by teachers and located in lessons. Andy now, possibly, feels increased ownership of his learning, viewing it important in its own right and relevant to him.

SF: “You can learn new things, but you cannot change how intelligent you are. Is that right?”

*“Yes you can, because if you learn new maths, your maths is intelligent. You can learn more words and then your spelling is intelligent. So you can learn things and get more intelligenter.” (A2:18)*

Here again Andy links learning with intelligence. He now appears to believe that learning has an overall impact on intelligence, and learning in specific areas enhances intelligence in that area.

### ***Intelligence beliefs – How might Andy perceive intelligence?***

Andy now considers intelligence to be:

*“Trying to make your brain clever, so you can think stuff very quickly, very complicated stuff very quickly.” (A2:6)*

This differs from how he spoke about intelligence in the first interview. He continues to suggest that intelligence and being ‘clever’ are the same, but now

appears to think that you can enhance your cleverness through learning. Andy goes on to reply that intelligence is something that can change *“if you work hard.”*

However, he suggests that this can happen only under certain conditions:

*“Well it depends if they want to, but they have to go to school anyway, but if they are lazy it might happen a bit. But you shouldn’t be lazy. You should work hard.”* (A2:12)

A key message in the ‘Brain Buzz’ sessions is the need to try hard and work hard as a way to learn as much as possible. Andy appears to have remembered this and reiterates its importance.

### ***Self-beliefs – How might Andy perceive his abilities?***

The ‘Brain Buzz’ sessions appear to have influenced Andy’s belief about his own intelligence:

*“I’m very intelligent I think. I work my hardest at school so I’m trying to get even more intelligenter.”* (A2:20)

When asked if he could become more intelligent, Andy responded:

*“Yes, because my brain can get bigger if I try to learn things. Anyone can get more intelligenter I think but you have to try to.”* (A2:22)

This suggests a shift in his understanding of how learning influences intelligence, and implies that Andy now, possibly, views his intelligence as something he can improve by working and trying hard. The power to learn and become more intelligent lies with him; whereas, prior to the intervention, learning was something teachers wanted you to do and learning new things would not affect his intelligence.

In school, Andy had consistently seemed to fear failure in lessons and, also, in the first interview, his concern at finding the correct response was apparent. His answers in the second interview appeared to be more confident, and he needed



reassurance less often. However, when asked, “Is it still a worry if you get things wrong Andy?” he suggests that he is still worried about making mistakes.

*“I don’t like getting things wrong Sue.” (A2:24)*

He recalled Tom’s words about mistakes being part of learning, but Andy concludes that it’s still important to get things right:

*“Tom told us to try to only make new mistakes. I don’t know why because it’s better not to make any mistakes ... But I think it’s better to just try to get it right the first time.” (A2:30)*

Andy stood up following this questioning and asked if he could go, which may suggest that he was not comfortable with this aspect of the conversation.

Self-theories’ research suggests that when individuals are concerned with demonstrating their ability, they are more likely to see failure as indicating a lack of ability. These individuals are more likely to experience failure as disheartening and demonstrate a ‘helpless’ response to failure (Elliot & Dweck, 1988; Utman, 1997). Although Andy gave responses that seemed to suggest that he believed that intelligence was malleable, something he could increase by learning new things, his concern about making mistakes seemed to contradict this. However, it is possible that difficulties linked to his diagnosis of autism also impacted upon his performance anxiety.

In the second interview, Andy was able to think of more things he was good at, possibly suggesting that he felt more confident in his own abilities. When asked what he thought he was good at, he replied:

*“I told you last time: History.” (A2:32)*

SF: “History? Anything else at school?”

*“Well my spellings are getting better. I got ten out of ten the last two times. And I did well in maths too. And I did a good cake – a chocolate one.” (A2:34)*

SF: "Sounds good. Anything else?"

*"No, not yet."* (A2:36)

Andy was able to list recent achievements in school in a more confident manner and, when he had run out of things to say, he stated there was nothing else "yet". This suggested that he felt that could become better at other things in the future and may imply that, now, Andy can conceive of personal development, learning and growth as a realistic possibility.

***How might the intervention have affected Andy's learning, intelligence and self-beliefs?***

The changes in Andy's responses possibly suggest that there has been a shift in his views of intelligence and learning. His use of the word "yet" implies that he might now believe that he may learn more in the future, and has at least some potential to become 'good' at certain things. It appears possible that he has altered his personal self-theory from a fixed mindset to an incremental, growth mindset. The experiences he gained from the intervention may have helped Andy to develop increased self-confidence, and consider learning to be something he can succeed in through hard work.

However, when asked if intelligence can change, Andy still mentions "*people with problems*" (A2:10), suggesting that Andy still considers that the existence of 'problems' inhibits the opportunity to increase intelligence. However, by referring to "*they*", he does not seem to consider himself as one of the people with problems:

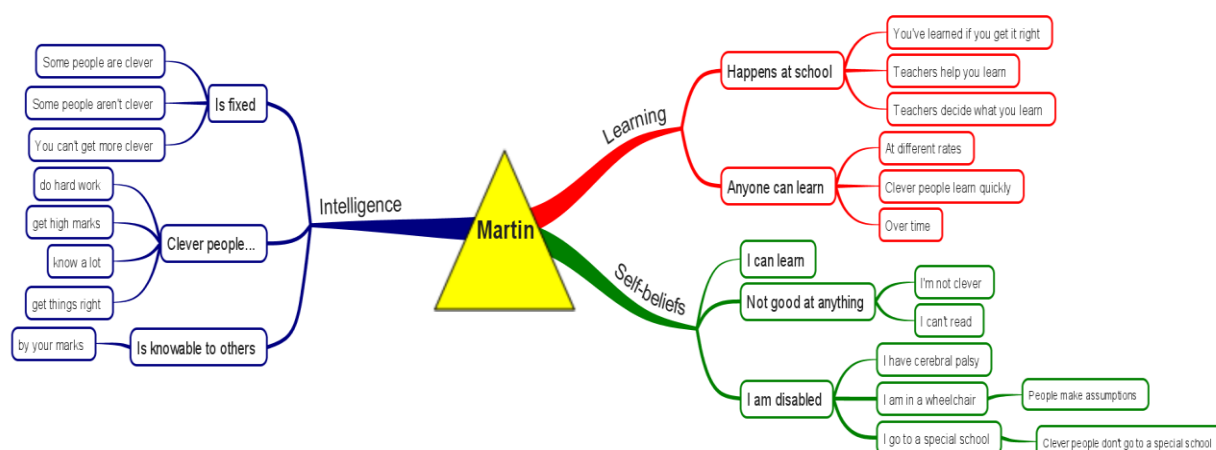
*"Well it depends if they want to, but they have to go to school anyway, but if they are lazy it might happen a bit."* (A2:12)

When I asked Andy to verify my understanding of what he had said at a later date, he added that “*people with learning difficulties might be just lazy because they can’t learn things.*” This seems to indicate that he may have developed stereotypical views of individuals with such difficulties, and has generalised his beliefs to all members of that group.

### 4.3 Martin

Martin’s responses in both interviews suggest that he had few problems in understanding the questions. He also was able to express his views with relative ease.

#### 4.3.1 Interview 1



**Thematic Mind-map M1** Martin’s responses before the Intervention

#### **Learning beliefs – How might Martin understand learning?**

Martin’s responses and comments suggest that he believes in his own ability to learn and he was able to give examples of progress he had made in his own learning. He appears to believe that learning is possible for anyone but the rate of progress may differ. However, his answers also suggest that he does not relate learning to intellectual improvement.

*"You learn new stuff at school so you can learn new things. But how intelligent you are?" (M1:12)*

Martin stated that you can assume that you have learned something if you get the 'right' answer when questioned. This appears to suggest that outcomes communicate learning more than the process:

*"Well, you know if you get things right then you must've learned it. Like in maths, you get the sums right or you spell words right or something like that." (M1:4)*

This possibly suggests that Martin views learning as the transmission of knowledge from the teacher to the pupil (Brody, 1991), with the teacher confirming whether or not learning has taken place, by verifying that answers are right or wrong.

### ***Intelligence beliefs – How might Martin perceive intelligence?***

Martin understands intelligence in terms of being 'clever' and getting things 'right'. This possibly implies that his view of intelligence is something that is fixed and knowable to others by looking at and judging his work.

*"Intelligence is like how clever you are. If you're intelligent then you're really clever, really smart, really good at things, in lessons and stuff. You always get things right." (M1:2)*

Martin seems to view intelligence as something you either have or don't have:

*"Some people are clever and some people aren't clever." (M1:8)*

He also appears to believe that if you aren't intelligent, there is nothing that can be done about it:

*"You can't get more intelligent, I don't think so anyway." (M1:12)*

Following this utterance he considered this further, remembering that he had said intelligence was being clever:

*"Maybe you can if you know lots of stuff but I don't know. Clever people know a lot don't they?" (M1:16)*

This suggests that it might be possible to challenge Martin's belief that intelligence is fixed and static, by considering the possibility that to become clever, it is important to learn things. He had already acknowledged that he can learn, and can offer examples as evidence of his learning. Logically, it follows that through learning, he can become cleverer and thus more intelligent. Martin does not state this, but, from his statement, it is, perhaps, implied.

Martin was very specific about his level of intelligence. When asked how intelligent he thought he was, he said:

*"Only a little bit clever probably. Not much you know."* (M1:40)

When asked why:

*"I don't know. But I think other people are cleverer than me. Not everybody (laughter) like Carl, he's not clever. I don't think he can walk and breathe at the same time (laughter). No not really, but I know I'm cleverer than some people. I'm just not clever – if you know what I mean."* (M1:42)

Here Martin communicated his own perceptions of another pupil in a similar manner to how he believes others view him. He also made self-depreciating comments about his own intellectual capacity or capability:

*"Well maybe I'm too thick to know about it! (laughter)"* (M1:18)

He went on to offer evidence as to why he knew he was not intelligent by including me in his argument. When answering the question, "How intelligent do you think you are Martin?" he said:

*"Not very! Well you know Sue, you know that I can't read very well."* (M1:20)

He implied that his lack of intelligence should be evident to me because I know he is not an able reader. This again suggests that intelligence is knowable to others based on outcome evidence, in this case, his reading ability. Therefore, it possibly seems to Martin that intelligence is evident, measurable and knowable through observing academic and learning outcomes.

When asked if he could become more intelligent, he said:

*“No, I don’t think I could. I have got better at reading and better at other stuff than before but I’m still not very good. I’m still not very good. I’m not doing GCSEs or ‘A’ levels like Sam and other people would be if they were my age. ... No, people wouldn’t think I’m clever.” (M1:26)*

Here Martin seemed to suggest that his intelligence was static, fixed and evident to ‘people’ based on the level of qualification he was studying. Although Martin accepts that he has made progress, this does not suggest to him any improvement in his intellectual abilities. The fact he repeats that he’s *“still not very good”* suggests that he views his progress as unimpressive when viewed against the progress, and attainment of other pupils of his age. Here, Martin appears to link academic ability, progress and attainment directly to low and fixed intelligence.

### ***Self-beliefs – How might Martin perceive his abilities?***

Martin presents as a friendly, confident and sociable boy. However, his answers suggest that the level of insight he has into his difficulties may be greater than that of his peers. Also, he was able to provide his own interpretation of what ‘others’, people who don’t know him, may believe about him, simply on the basis of their assumptions of him and his disabilities.

Martin spoke of what he believed it meant to be educated in a special school:

*“I don’t think you’d be in a special school if you were intelligent, so I can’t be (intelligent) can I?” (M1:22)*

Even when offered an exception to this rule, Martin was able to explain that being in a special school implied something was ‘wrong’ with all of the pupils in some way. Speaking about Sam who attends school but studies A levels:

*“Yes, but he’s got something else wrong with him.” (M1:24)*

Martin communicates his belief that being educated within a special school implies something is 'wrong' and 'people' will know this to be true. Tajfel (1981) and others considered identity as embedded within a social group or category. Martin seems to relate the category of 'special school pupils' to the identity of such pupils, and that this particular identity is limiting. Although his peers are his friends, including the pupil I suggested as an exception, Martin was quick to state that even if pupils are intelligent, measured by success at GCSE and A-level, they still have something 'wrong' with them, significant difficulties from which they cannot escape. Possibly, this is because these difficulties are fixed in the same way as their intelligence.

Martin also assumed that 'others' would consider him to be unintelligent based only on what they saw:

*"People wouldn't think I'm clever."* (M1:26)

SF: "Why do you believe that?"

*"I just do. People who don't know me very well don't think about what I can do. They don't know what I can do because they don't know me so they don't know." ... "Because people make assumptions."* (M1:28 & 30)

I believe that Martin was alluding to using a wheelchair. In this respect he differed to all the other participants whose difficulties are less visually obvious. Martin suggested that people would assume he was unintelligent because they can see his physical difficulties:

*"They would say 'oh, he goes to a special school,' 'oh, he's in a wheelchair' or 'oh, he can't read so he's not clever' 'his legs don't work' 'he's got cerebral palsy' 'he's disabled' stuff like that."* (M1:32)

Martin's perceptions were that people would assess him on the basis of simply looking at him in his wheelchair and assume he was unintelligent. Shrauger and Schoeneman (1979) suggested that self-concepts are filtered through individual

perceptions linked to how the individual believes others regard them. Yeung & Martin, (2003) suggested that there are three main components of the 'looking glass self'. Martin:

1. Imagines how he must appear to others ~ "He's disabled".
2. Imagines the judgment of others ~ "he's not clever".
3. Develops his self-concept through these perceived judgments of others

*"People wouldn't think I'm clever."* (M1:26)

This may lead Martin to believe: 'I'm not clever.'

Martin seems to make judgements of others in the same way that he assumes they make judgements about him. He may believe that others pre-judge him based on looking at him or knowing that he has 'cerebral palsy', is 'disabled' or attends a 'special school'. Bogdan and Knoll define as a stereotype: "When prejudice takes on the form of a specific belief regarding a particular group, it is a stereotype." (pg. 467) So Martin seems to believe that others hold stereotypical views about him and he holds stereotypical views about himself. When asked if this bothered him, he said:

*"Not much because I don't know them and they don't know me."* (M1:34)

*"Because they don't know me, they maybe think they do. They look at me and they think they do. They look at me and they think they know stuff about me."* (M1:36)

Checking back with Martin, he agreed that he believes others "judge" him based on what they see when they look at him. However, Martin spoke negatively about Carl, although jokingly, his comments were strikingly similar to the stereotypical judgements he assumed that 'others' made about him:

*"...Carl, he's not clever. I don't think he can walk and breathe at the same time (laughter)."* (M1:42)



Here Martin compared himself and his abilities with Carl rather than with a wider population, and judged himself to be more able. This comparison may serve to raise Martin's self-confidence and have a positive effect on his identity beliefs as self-concept is considered flexible and dynamic (Campbell, Assanand & Di Paula, 2000; Nowak & Vallacher, 1998). Research suggests that there are several possible expressions of global self-concept and these are moulded through various interactions with other individuals and groups, by means of various contextual influences (Nowak, Vallacher & Zochowski, 2002). So, although Martin may believe he is more able than Carl, he does not consider himself to be 'good' at anything.

SF: "What do you think you're good at Martin?"

*"Good at? ...Nothing. Emm... well I don't think I'm good at anything in particular."* (M1:44)

*"Well I make a good cup of tea! (laughter) I suppose I'm good at wheelchair football. I beat you didn't I?"* (M1:46)

*"...I'm not particularly good at much Sue."* (M1:48)

Martin plays for a regional wheelchair football team and has potential to play nationally in his age and disability category; however, for him, this was not evidence of being good at something, stating, for example, that the only reason he beat me was my lack of practice. It did not appear that this was false modesty or an understatement designed to elicit a complement. This apparent lack of self-esteem appeared authentic, although it may be, that in this case, Martin was comparing himself and his abilities with a wider, possibly non-disabled, population and finds himself lacking.

Martin was the only pupil who did not hold out hope that he could become good at something or believe in his own abilities. When reminded that the class was

going to learn about how people learn and how to get better at learning, his response to whether this would make a difference to him was:

*“Doubt it.” (M1:50)*

Sutherland (1984) warned that stereotypes become “self-fulfilling prophecies”, and influence how groups think of themselves. “Stereotypes are hard to shake ... (they) shape the way a particular group views itself within the context of the world-at-large.” (Medgyesi, 1996, pg. 44). Martin appeared to accept that his ability to learn was fixed by his disabilities; this pessimism was in stark contrast to the boy I thought that I knew. His beliefs about himself, his intelligence, his ability to learn and be ‘good’ at something appeared to be accepted and assumed to be fixed by his difficulties. Most surprising was the tendency to judge himself and his peers as he perceived ‘others’ judged him. The words he used to appraise himself and his peers appeared to contradict his personal experience and relationships in school which I would have believed to be very positive. When checking back this interview transcript with Martin, he listened to his interview and made a further comment which was not captured on tape:

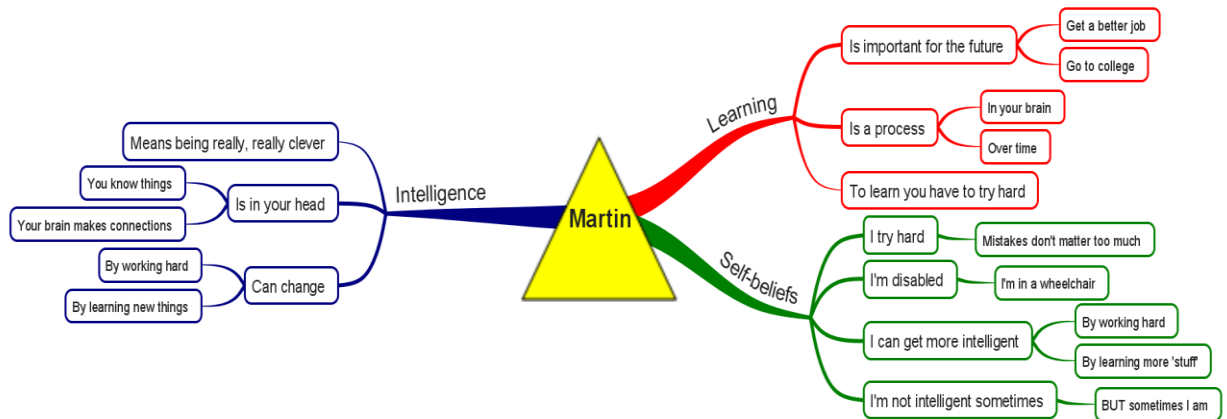
*“I don’t sound like I think much of myself do I Sue?”*

I agreed that he seemed to play down all his achievements.

*“Yeah... I can hear that when I listen back to it.”*

Therefore, another facet of the research process, which I had considered a mere checking exercise, allowed Martin to appreciate how he sounded about himself; possibly, this increased self-awareness may have prompted the changes that followed.

### 4.3.2 Interview 2



**Thematic Mind-map M2** Martin's responses after the Intervention

#### **Learning beliefs – How might Martin understand learning?**

A number of Martin's responses differed in his second interview. In contrast, he mentioned that learning was important to his future:

*"I think that learning is so that you can get a better job when you leave school or college, so that you can either get into a better college or get into a better job."* (M2:2)

Finlay and Lyons (1998) suggested that children with learning difficulties are perceived by others as less likely to fulfil socially acceptable goals in life, such as succeeding at school, living independently and progressing with a career. Martin suggests that learning is a possible way to improve your chances of success in later life. He also stated that learning was linked to a process not only an outcome:

*"Oh yes, your brain makes connections and things. It like makes new paths and when you learn things, you remember things and they connect and you like, emm, know things."* (M2:8)

This suggests that Martin has changed his understanding of the nature of learning, although it is still linked to an increase in knowledge, *"you like, emm, know things"*, and reproducing from memory, *"you remember things"*; however, the process of learning is accepted as allowing your brain to make connections. This appears to stem from knowledge gained during the intervention. This may

help him to make the most of learning opportunities during lessons by remembering that he makes connections when he learns, and that when things get harder brain connections are still made through hard work.

### ***Intelligence beliefs – How might Martin perceive intelligence?***

In the second interview, Martin linked learning to knowledge and intelligence:

*“When you are like really, really, really clever, and you know lots and lots and lots of stuff. Like in your brain, in your head.” (M2:6)*

Linking knowledge (knowing ‘stuff’) and intelligence (being ‘really clever’) is another change. This might lead Martin to view his intelligence as something he can control.

SF: “Is it right that ‘you have a certain amount of intelligence and you can’t do very much to change it’?”

*“No, I think if you learn more stuff, you get more intelligent.” (M2:10)*

Therefore, he now appears to have altered his belief that intelligence is fixed. By linking intelligence to learning, it becomes possible to become more intelligent. This is a noteworthy change from his views in the first interview.

### ***Self-beliefs – how might Martin perceive his abilities?***

The changes in Martin’s views of intelligence also appeared to impact upon his self-concept. When asked how intelligent he thought he was, he replied:

*“Well sometimes I’m ok but sometimes I think I’m a bit stupid. It depends what I’m doing. When you do something and you can do it, you feel clever so I think that can make you feel like you’re intelligent. I’m not very intelligent I don’t think but I’m ok. It’s hard to know for certain really isn’t it? Maybe sometimes I’m clever sometimes I’m not. I’m more intelligent than some people ‘though.’ (laughter) (M2:24)*

SF: “Could you get more intelligent?”

*“Yes I think so, but I have to try hard and learn stuff and work hard and stuff. But yes I can get more intelligenter...(laughter) that’s not a word!...” (M2:26)*

Martin's responses appear to communicate an important change in what he believed was possible. He now accepts that, although he still believes he is not very intelligent, he can do something to improve that. He can work hard and try hard and through learning, he can become more intelligent.

SF: "What do you think you are good at?"

*"I think I'm good at having a go. I try hard."* (M2:28)

Martin found it easier to find something he was good at than he had done in his first interview:

*"I'm good at wheelchair football sometimes maths and I'm good at talking (laughter) as you know!"* (M2:28)

He also considered 'having a go' as important enough to mention and 'trying hard' as significant things to be good at. In his first interview he mentioned observable strengths such as wheelchair football, but also played down how good he was at these things. He now seemed more confident accepting he was good at something without attempting to diminish his accomplishments.

SF: "Do you feel more confident about learning than before Martin?  
You've told me today that you're good at 'having a go'."

*"Confident about having a go? Yes I think so. I know more about learning now but not so much about always getting it right."* (M2:30)

It seems possible that as he now understands learning as something that has an impact on his intelligence, with the power to improve influenced by effort, Martin seems to feel that he is more efficacious in his school life.

When asked if he felt more confident about being able to learn than he did before, he said:

*"Yes I think so but not so much about getting it right."* (M2:30)

He is still less confident about getting things 'right' (outcome) but is now more confident about trying to learn (process). However, Martin expressed that it didn't

matter if you made mistakes; he repeated one of his teacher, Tom's favourite phrases:

*"If you don't make mistakes sometimes you probably aren't learning much."*  
(M2:32)

It appears that Martin now considers learning to be about more than getting the right answer. In fact he now considers that it is necessary, possibly even helpful, to make mistakes in order to learn.

***How might the intervention have affected Martin's learning, intelligence and self-beliefs?***

A difference in attitudes and beliefs is evident from Martin's responses to the interview questions before and after the intervention. He appears to have altered his self-theory from a fixed mindset to an incremental, growth mindset. He now seems able to apply learning experiences to himself, his learning and his intelligence; from this it seems that his self-concept and his understanding of intelligence have changed. This may or may not be because of the intervention, but the changes possibly suggest that Martin has learned some key ideas that have helped him develop a new understanding of the nature of intelligence.

#### **4.4 Matthew**

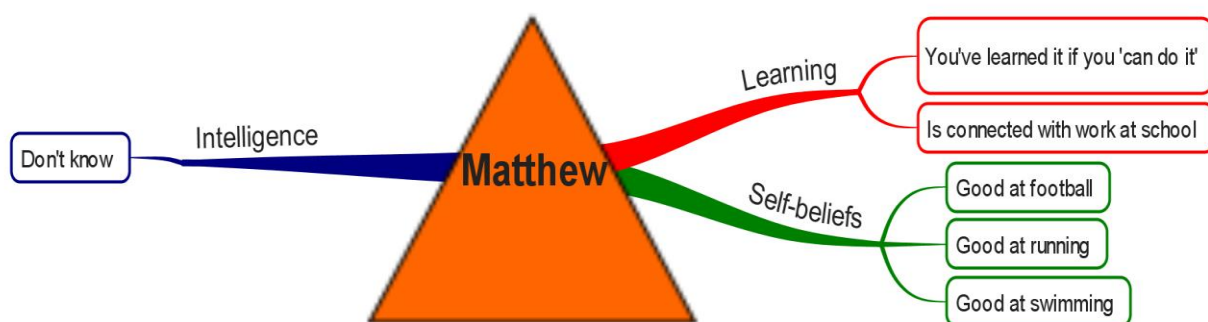
Matthew's expressive language difficulties make it challenging for him to explain his responses, as he struggles to speak clearly and express sentences beyond a few words. This does not imply that he does not understand the questions rather that he struggled to answer them.

For this reason, Matthew's responses in both interviews were at best short, and, may have been based on what he assumed I wanted him to say. Furthermore,

on some occasions, it is possible that his statements do not reflect what he actually means. Consequently, this section should be read with the caveat that Matthew's actual views might not have been accurately represented. However, even taking this into account, it does appear that Matthew's views altered over the course of the intervention.

Matthew's expressive language difficulties raises issues about the suitability of the method used, which is explored in Chapter 6.

#### 4.4.1 Interview 1



**Thematic Mind-map W1** Matthew's responses before the Intervention

#### **Learning beliefs – How might Matthew understand learning?**

Matthew's responses suggest that he considers learning to be something to do with the work that you do at school. He agreed that it is possible to learn new things and that you know you've learned something when you:

*"Can do it."* (W1:8)

Therefore, he seems to think that learning is observable and knowable to others by the evidence of the outcome of learning.

#### **Intelligence beliefs - How might Matthew understand intelligence?**

Matthew responded that he did not understand the word 'intelligence'. I offered 'clever' as an alternative and he appeared to understand this. However, Matthew

still struggled to answer any of the questions about intelligence. This may be due to his expressive language difficulties, but it does seem possible that Matthew also struggled to understand these questions as they related to unfamiliar concepts of which he had little prior experience or knowledge.

### ***Self-beliefs – How might Matthew perceive his abilities?***

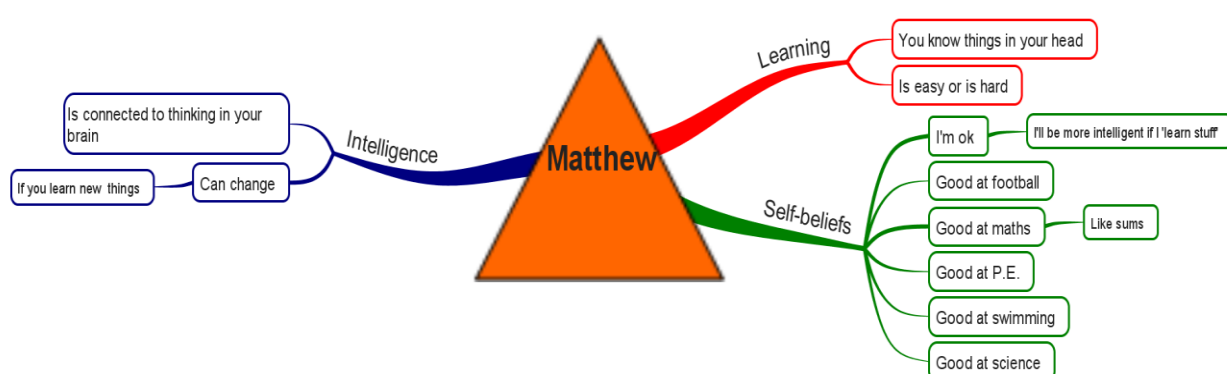
Matthew wasn't able to say whether he considered himself to be clever, but he was able to offer examples of what he thought he was good at:

*"Football"* (W1:32)

*"Swimming and run."* (W1:34)

Matthew is considered a talented footballer both within school and at home and has represented the school at swimming and athletics events. His assertion that he is good at these sports is likely to be based on his experiences and positive feedback. He also has a black belt in kick boxing which he did not mention. This may be related to this sport being based outside school and, therefore, he may have assumed it was of no interest to me in the interview. Matthew was unable to offer any suggestions of what he was good at academically.

### ***4.4.2 Interview 2***



***Thematic Mind-map W2 Matthew's responses after the Intervention***



### ***Learning beliefs – How might Matthew understand learning?***

In the second interview, Matthew offers a different perspective of learning. When asked what learning is, he responds: “*Easy or hard.*” I would consider this to be related to lessons and how he finds the learning objectives and work in class – it is either easy or hard. When prompted, he suggests that you “*know things*” when you learn, suggesting that learning is located in your head and is linked to knowledge.

### ***Intelligence beliefs – How might Matthew understand intelligence?***

Matthew stated that he understood the word ‘intelligence’ and linked this word to “*thinking*”. He agreed with my suggestion that this was also linked to using your brain to work things out; again, this may have been as a result of assuming this was the right answer (because I had said it) rather than his actual belief.

Matthew was able to say that he considered himself to be “*ok*” when asked how intelligent he thought he was. He was also able to say he could become more intelligent by learning things, suggesting that he views intelligence as something that can change and can be affected by his actions.

SF: “Can you change how intelligent you are?”

“*Yeah.*” (W2:26)

SF: “Yes? Do you know how?”

“*Learnin*” (W2:28)

SF: “Learning new things?” (Matthew nods)

### ***Self-beliefs – How might Matthew perceive his abilities?***

Again, Matthew was able to list things he thought he was good at. He began by listing sports, but went on to add some subjects in school:

SF: "What do you think you're good at Matthew?"

*"Football."* (W2:32)

SF: "And?"

*"Swimming... P.E. maths, science."* (W2:34)

SF: "Some lessons in school?"

*"Maths like sums an' that."* (W2:36)

This suggests that Matthew may have developed some confidence in his abilities and has an understanding that he can improve his ability in various areas by learning new things. This possibly indicates a developing growth mindset. Matthew stated that he felt he was good at maths, naming maths and science as areas of strength. This differs from before the intervention and suggests that his academic self-concept may have improved.

***How might the intervention have affected Matthew's learning, intelligence and self-beliefs?***

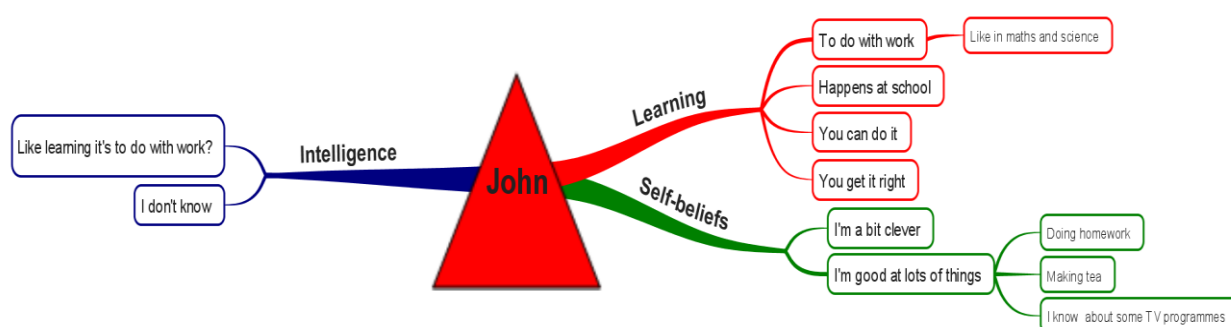
Despite his expressive language difficulties, there were noteworthy differences between Matthew's responses in interviews one and two. He was able to express that intelligence is affected by learning, and that, through learning, people can become more knowledgeable and, therefore, more intelligent.

However, it is impossible to be certain that his responses accurately communicate his beliefs as the difficulties he experiences, relating to both receptive and, most significantly, expressive language, are likely to affect the reliability of any findings.

## 4.5 John

John's responses in both interviews suggest that he was largely able to understand the interview questions, although he seemed uncertain of some vocabulary, particularly in the first interview.

### 4.5.1 Interview 1



**Thematic Mind-map J1** John's responses before the Intervention

### **Learning beliefs – How might John understand learning?**

John's responses suggest that he views learning as something that happens at school:

*"Learning? What you do with work."* (J1:4)

*"At school and stuff Sue. In work, in lessons like maths and science."* (J1:6)

John's responses seemed to imply that he thinks learning happens as a result of going to school and working in lessons, and that learning is located within the classroom. John also appears to believe that learning new things is possible. However, his response possibly indicated that he was uncertain about what he was being asked, as he has a tendency to agree when confused by a question, or is unsure of an answer.

### ***Intelligence beliefs – How might John understand intelligence?***

John's initial response suggested that he was unsure what the word 'intelligence' meant:

*"I don't know. Is that like what learning was? To do with work?" (J1:10)*

Because of his lack of understanding, I offered John the alternative word, 'clever' in the remaining questions. However, I believe that his answers still demonstrated a lack of understanding of the questions and, therefore, may not provide insight into his actual beliefs.

### ***Self-beliefs – How might John perceive his abilities?***

When asked how intelligent ('clever') he thought he was, John responded: *"Emm...I think I'm a bit clever."* However, this response was hesitant and so may not accurately reflect John's actual beliefs.

When asked if he could get more intelligent ('cleverer'), John was initially uncertain:

*"..Emm...I don't know but I think maybe I could but I don't really know. Can I? Mebes I can." (J1:28)*

However, when prompted, John mentioned several possible ways to become cleverer:

*"....Emm....if I do my work and listen and things like that Sue. If I learn new stuff maybe." (J1:30)*

This suggests that he considers cleverness as something that can change. However, a degree of caution is necessary as John was answering slightly different questions on the basis of substituting the word 'clever' for 'intelligent'. I also asked him the additional question about how you could get cleverer. This possibly prompted him to conclude that asking him 'how' meant it must be possible.

John viewed himself as “a bit clever” and was able to offer limited examples of what he was good at:

*“Well...I’m good at a lots of things.” (J1:32)*

SF: “Such as?”

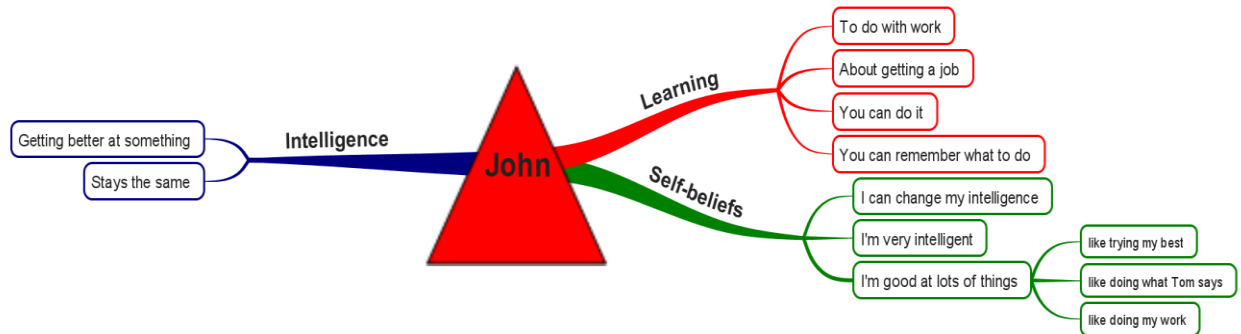
*“Emm...well, doing my homework and sometimes making things like cup of tea.” (J1:34)*

However, these examples related more to his areas of interest, specifically making cups of tea and watching Coronation Street. John is also very organised regarding his homework, which he completes on the night it is set as soon as he arrives home, and brings it to school the following day in his special ‘homework file’. He regularly receives praise for his system, his good organisation and completed homework. Therefore, it is perhaps unsurprising that this is something he feels confident about. I believe that this confidence is related to the system of completion (the process) rather than the quality of his completed homework (the product). John could not actually think of anything that he felt he was good at when at school, suggesting that he does not feel confident about his academic abilities. In fact, he seemed to be surprised to be asked:

*“Good? ...Well...I don’t know really Sue Fisher.” (J1:40)*

It may have been the case that John was unable to think of anything at school that he would consider himself to be good at, or it may be that he couldn’t think of something that I would consider him to be good at and, therefore, was reticent about offering suggestions.

#### 4.5.2 Interview 2



**Thematic Mind-map J2     John's responses after the Intervention**

#### **Learning beliefs**

In the second interview, John appears to consider that learning occurs through doing work, but also now considers learning to be important for the future:

*"Something that you do with work."* (J2:6)

*"About getting a job maybe."* (J2:8)

There is a possible semantic link between 'work' and 'job' which caused John to mention getting a job, but this may also be due to the work undertaken in the 'Brain Buzz' sessions mentioning learning as important for the future.

#### **Intelligence beliefs – How might John perceive intelligence?**

John has appeared to have developed a deeper understanding of the word intelligent over the weeks between the two interviews. He responds that intelligence is:

*"Getting better at something."* (J2:14)

However, he goes on to struggle to explain what he means by this, restating:

*"I think intelligent means you are getting better at something."* (J2:20)

John's responses to the questions also revealed his difficulties with receptive language. For example,

SF: Is it right that 'You have only got a certain amount of intelligence, and you can't do very much to change it'?

He agreed that this was correct but mainly on the basis that:

*"The way you were saying it I think you were right. I didn't know what it means until you were saying it, I just thought I never knew it myself until you said."* (J2:24)

This suggests that John may have agreed with me rather than with the words I was saying. As previously stated, he often agrees with adults when he is uncertain of the right answer, or he does not understand the words used in a question or used to engage him in conversation.

John again communicated that he believed he could change his intelligence by doing work at school. However, in his next answer he contradicted this, indicating that he is at least unsure about how to improve intelligence, if it can be assumed that he understood the question.

### ***Self-beliefs – How might John perceive his abilities?***

John's responses appear different in interview two compared to interview one.

John's beliefs about his own intelligence seem to have improved:

*"I'm quite intelligent. I think I'm very intelligent."* (J2:36)

When asked if he could become more intelligent, he responded:

*"No, I'm intelligent now."* (J2:38)

This change in his belief in his own intelligence is important as it may have an impact on his learning behaviours and, in turn, improve his self-concept.

However, his response also implied that his intelligence is fixed.

When asked what John considers himself to be good at, he responded:

*"I think I'm good at lots of things Sue Fisher...Like trying my bestest to work hard and try hard and do what Tom says and things like that. I am good at doing my work Sue."* (J2:42)

He now mentions working and trying hard as something worthwhile and also that he believes he is good at trying and working hard. It is possible that this implies that John now feels he is now a more effective learner. It also might imply that he is taking responsibility for his own learning, progress and achievement.

***How might the intervention have affected John's learning, intelligence and self-beliefs?***

John's responses in the first and second interviews suggests that learning from the intervention, specifically the 'Brain Buzz' sessions, may have had some impact upon his understanding of learning and intelligence. He now appears to consider himself to be good at trying and working hard and to be intelligent. It also appears that John has more self-confidence and that he has more self-efficacy regarding his learning. He now believes that he is good at doing his work and trying his best; he seems to have linked these behaviours with becoming cleverer.

#### **4.6 Conclusion**

I consider that the individual findings presented in this chapter have provided insight into the perceptions and understandings of the individual pupils with regard to the research questions. However, for all the participants, issues have been raised regarding the suitability of the research methods, such as using semi-structured interviews to collect data; these issues will be addressed further in Chapter 6.

In Chapter 5, I combine the responses of the pupils and the responses of the two members of staff working closely with these pupils every day. Together, these



findings suggest answers to the research questions which are revealed and discussed.

## **CHAPTER 5: COLLECTIVE FINDINGS AND DISCUSSION**



*Individuals break free and “fly off into the world as independent creatures”*

### **5.0 Introduction**

In this chapter I address each supplementary research question in turn. The findings are presented in thematic mind-maps, which combine findings from all participants, including staff.

In order to consider the main question, staff responses to semi-structured interviews were also transcribed and grouped into themes relating to the research questions (see Appendix 8 for an example). I checked my understanding of both the pupils and staff responses with the participants individually and with the staff participants also reviewed sections of this chapter to ensure that I had not misinterpreted their words. However, it is important to emphasise that given my epistemological stance, whatever steps are taken to minimise misunderstanding, the findings reflect my interpretations.

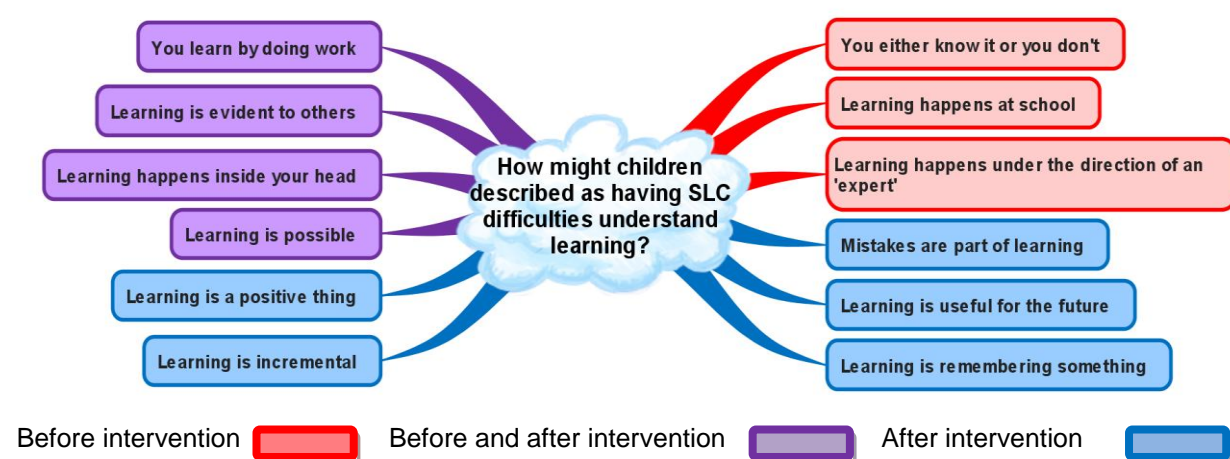
In this chapter each mind-map was constructed by collecting pupil responses relevant to each research question and grouping these responses into overarching themes (see Appendices 9, 10 and 11). Responses were colour coded on the basis of when they were offered: red (only in interview one),

purple (in both interviews one and two) and blue (only in interview two). These colour codes were used to enable identification of themes which disappear, themes which remain consistent over time and new themes.

Following this, the main research question is addressed, considering the applicability of self-theories to pupils with SLC difficulties, with reference to both staff and pupil responses. Pupil and staff participants provide individual responses that create ‘facets’ of a single collective ‘crystal’ (Richardson , 1994) with each facet as important and necessary as any other. It is important to restate that I am not suggesting that any changes discussed are due to the ‘Brain Buzz’ intervention; there are many possible reasons for changes in responses. However, the nature of any changes may suggest whether self-theories research has applicability to pupils with SLC difficulties.

## 5.1 Supplementary Research Question 1

*How might pupils described as having speech, language and communication difficulties understand ‘learning’?*



**Thematic Mind-map RQ1** *Pupils' responses before and after the 'Brain Buzz' Intervention*

The responses provided by the pupils are grouped into dominant themes, before the intervention, both before and after the intervention and after the intervention. Each is discussed in turn. Individual responses of all the pupils, grouped according to theme, are shown in Appendix 10. The colour used in each sub-heading refers to the colour key used in each thematic mind-map.

### **5.1.1 Before the intervention**

#### **5.1.1a Learning: *'You either know it or you don't'***

Some pupils suggested learning is an outcome that is either achieved or not.

*"Hmm...you might know something or not know something."* (A1:6)

Martin and Ramsden (1987) conceive learning as an increase in knowledge that can then be reproduced from memory. This seems to mirror the perception of the pupils; their responses suggest that learning is a surface conception: you either know something or you don't.

#### **5.1.1b Learning: *'Happens at school'***

A number of pupils stated that learning was connected with school and with the work they do at school. These comments ranged from very straightforward comments, such as "in school", to more elaborate responses, such as:

*"Learning is what you do at school I think. Like in lessons and stuff."* (M1:2)

Possibly this indicates that the participants consider learning as context specific and not something that occurs more generally in life. Learning appears to be viewed as something that only happens in school; this may imply that the pupils do not recognise that learning occurs in other situations.

### 5.1.1c Learning: *'Happens under the direction of an 'expert''*

Some pupils appeared to view learning as something that occurs under the direction of a teacher in a classroom.

*"You learn things by listening to the teacher and by doing things."* (M1:2)

*"Well you know if you get things right then you must've learned it. Like in maths, you get the sums right or you spell words right or something like that. You do work right and the teacher says you're right."* (M1:4)

Here, Martin's perception appears to be that learning is the outcome of teachers imparting knowledge to pupils, and making judgements as to whether this knowledge has been successfully learned or not.

This belief suggests that power in the classroom rests with the teacher and makes it the teacher's responsibility to ensure each pupil learns. A possible consequence is that this might influence pupils' levels of personal efficacy within the classroom. As perceptions of self-efficacy is believed to be a significant predictor of behaviour, (Kennett and Keefer, 2006), this possibly means that there could be an impact upon levels of engagement, motivation and work ethic. Martin and Ramsden (1987) suggest that learning is something external to the learner and that it occurs through a process of a novice passively receiving knowledge from an expert. The pupil responses suggest that this is how they perceive learning.

### 5.1.2 *Before and after the intervention*

#### 5.1.2a *Learning: 'You learn by doing work'*

Overall, pupils seemed to view learning as something possible to improve with hard work. This understanding appears to relate to learning as a surface process in which work dispensed by the teacher is completed. For example:

*“...the teachers want you to learn things.... in the lessons and then you learn things and you do things and that’s what learning is....” (A1:6)*

The ‘Brain Buzz’ lessons suggested that learning new things built new connections within pupils’ brains; it is possible that these lessons supported this perception.

#### 5.1.2b Learning: *‘Is evident to others’*

Some pupils mentioned that they thought learning can be seen and possibly judged by others.

*“...you know if you get things right then you must’ve learned it. Like in maths, you get the sums right or you spell words right or something like that. You do work right and the teacher says you’re right.” (M1:4)*

Possibly, this is based on their perception of how learning occurs in school and how it is judged, by getting correct answers or obtaining good marks. As a result, pupils might be reluctant to try as they risk making mistakes which could be interpreted as poor ability to learn.

#### 5.1.2c Learning: *‘Happens inside your head’*

Some pupils viewed learning as brain-based and, because of this, it happened in your head.

You know things *“in your head.”* (A1:6)

*“You know stuff in your head.”* (A2:2)

Possibly, this was because pupils did not include developing skills such as those they practiced in therapy sessions as learning.

#### 5.1.2d Learning: *‘Is possible’*

A number of pupils stated that learning was something they felt they could do, and that it was possible to learn new things, mainly through trying and working hard.

*“You can certainly learn new things – I know you can definitely learn things.”*  
(A1:22)

*“... because you are learning new stuff all the time.”* (M2:18)

Before the intervention pupils mentioned learning as something they could do; generally, they only commented about things they believed they did well or felt were ‘easy’.

### **5.1.3 After the intervention**

#### **5.1.3a Learning: ‘Is a good thing’**

Following the intervention, attitudes towards learning seemed to have improved with most pupils tending to view learning as something positive and helpful. This is supported by staff:

*“I also think some kids are more confident now too and maybe even like to learn. Like learning is a good thing to do. Instead of maybe feeling a bit helpless or hopeless or hapless (laughter) I think it’s been empowering for them. Liberating even.”* (T2:24)

Conceptions of learning have been demonstrated to have a significant influence on the ways pupils choose to approach learning (Van Rossum and Schenck, 1984) and on learning outcomes (Marton and Säljö, 1976). Consequently, this is, potentially, a powerful shift in perception, and could lead to improved learning behaviours. If learning is believed to be ‘good’ it is possible that pupils may start to approach their learning more positively and engage in learning opportunities more effectively.

#### **5.1.3b Learning: ‘Is incremental’**

Although a minority view among the pupils, it is worth pointing out that Martin and two members of staff stated that learning increases over time.

*“... so you know more and more stuff. And then you can use the new stuff to do work or to know more things.”* (M2:18)

This suggests that learning is now perceived as a process rather than an outcome and follows from the idea that, as new things are learned, connections are made in the brain which was introduced in the 'Brain Buzz' sessions.

#### 5.1.3c Learning: *'Mistakes are part of learning'*

Initially, the pupils, particularly Andy, seemed to have a fear of failure. However, following the intervention, most seemed able to accept that making mistakes is part of the learning process.

*"Confident about having a go? Yes I think so but not so much about getting it right."* (M2:30)

SF: Does it always matter to get it right?

*"No just make a different mistake. If you don't make mistakes sometimes you probably aren't learning much."* (M2:32)

Staff also noted that most pupils were more willing to accept mistakes and assistance from others as a 'normal' part of lessons.

#### 5.1.3d Learning: *'Is useful for the future'*

Both John and Martin stated that learning was important for their futures.

*"I think that learning is so that you can get a better job when you leave school or college, so that you can either get into a better college or get into a better job."* (M2:2)

For these two students, learning now seems to be perceived as something that will help them gain access to contexts they consider important to their future lives.

#### 5.1.3e Learning: *'Is remembering something'*

Initially, some pupils mentioned that learning was memorising or reproducing facts suggesting that learning relates to facts that you either know or you don't



and that learning is evident and knowable to others. However, following the intervention, some pupils seemed to regard learning as brain-based, creating new pathways and making connections and helping them to recall required information:

*“Trying to make your brain clever, so you can think stuff very quickly. Remember very complicated stuff very quickly.” (A2:6)*

#### **5.1.4 Supplementary Research Question 1 ~ Conclusion**

Notwithstanding Carl and Matthew’s difficulties in understanding and/or responding in the interviews, overall, pupils’ perceptions of learning appeared to be different in the two interviews. Initially, the students saw learning as directed by the teacher, occurring at school and something that can be demonstrated and observed by others, although it happens in your head. Following the ‘Brain Buzz’ intervention, learning appeared to be viewed as something possible and useful, and important for the future; also, pupils now seemed less concerned about making mistakes and more accepting that mistakes can be part of the learning process.

## 5.2 Supplementary Research Question 2

*How might pupils described as having SLC difficulties perceive 'intelligence'?*

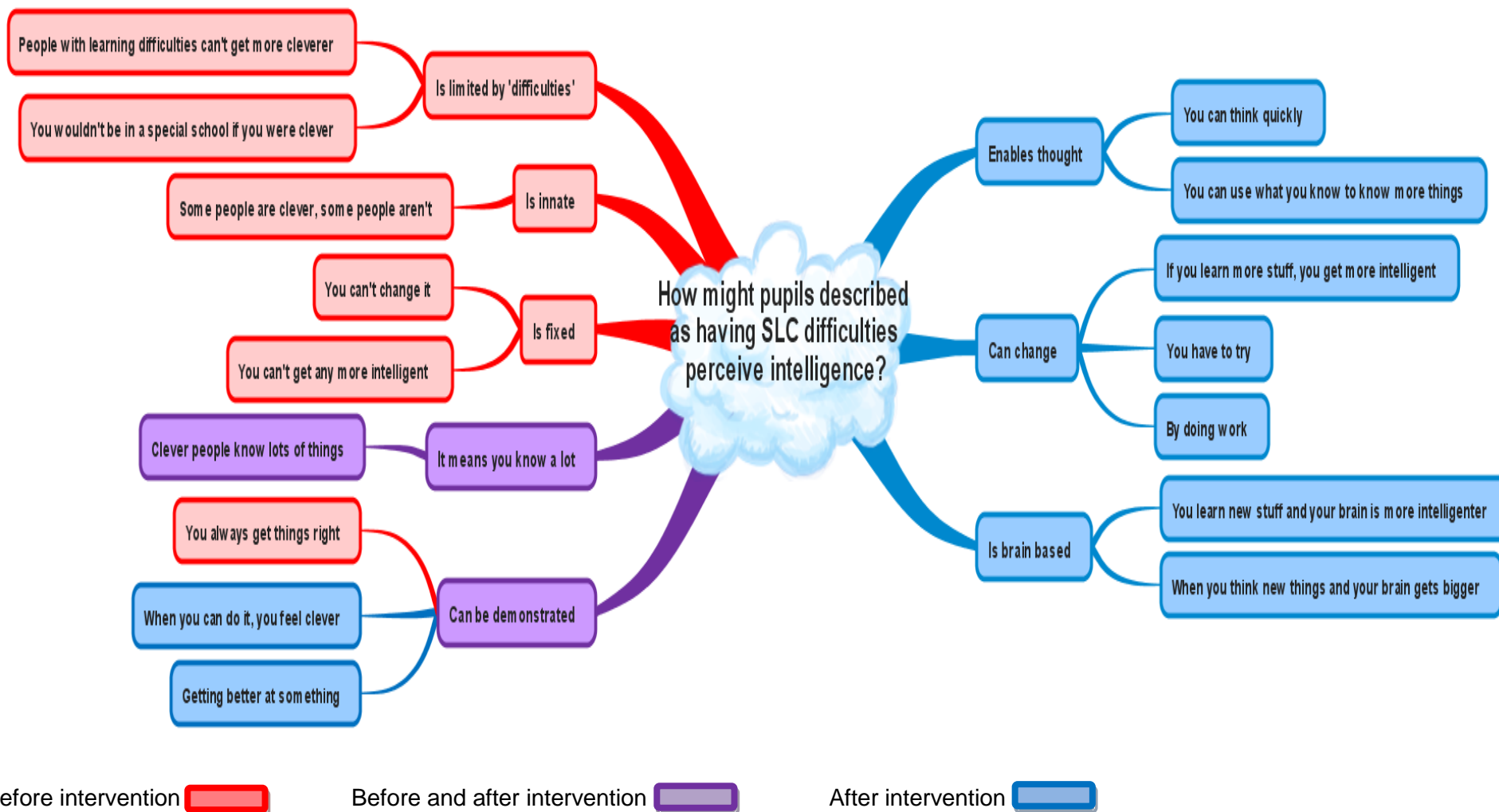
The thematic mind-map for research question 2 is shown overleaf. Individual responses of all the pupils, grouped according to theme, are shown in Appendix 11.

### 5.2.1 *Before the Intervention*

#### 5.2.1a *Intelligence: 'Is limited by 'difficulties'*

Some pupils mentioned that difficulties, such as 'learning difficulties' or 'cerebral palsy', limit intelligence, and that attending a special school signalled or confirmed these difficulties and implied a lack of intelligence.

These beliefs may have stemmed from pupils developing their own understandings of the terms and labels used to describe them and their limitations. As Wetherall and Maybin, (1996) state, "Language is not a transparent medium for conveying thought, but actually constructs the world and the self in the course of its use." (pg. 220) This is also relevant to my own interpretation of the pupils' words, and the words I choose to explain my interpretations. The pupils' constructions of 'self' may have led them to assume that their difficulties, or the difficulties that they have observed in others, imply a lack of, or limit to, intelligence.



### *Thematic Mind-map RQ2*

*Pupils' responses before and after the 'Brain Buzz' Intervention*

### 5.2.1b Intelligence: *'Is innate'*

Before the intervention, some pupils appeared to view intelligence as something you either have or you don't:

*"Some people are clever and some people aren't clever."* (M1:8)

This suggests that pupils tended towards fixed mindset beliefs, assuming intelligence is innate; i.e. that it cannot be developed, improved or increased.

### 5.2.1c Intelligence: *'Is fixed'*

Before the intervention, some pupils stated that they believed that intelligence could not change, which again, possibly, implies fixed 'mindset' beliefs.

*"You can't change it (intelligence) very much? No probably you can't."* (M1:10)

*"You can't get more clever from somewhere can you? That's silly."* (A1:20)

Viewing intelligence as fixed and innate (5.2.1b) suggest that many pupils were entity theorists and, as a result, they may be more concerned with outdoing others in order to prove their intelligence, and may hold 'performance goals' rather than 'learning goals'. This may leave them vulnerable to negative feedback; as explored in Chapter 2, such pupils are perhaps more likely to disengage from learning opportunities because they may anticipate a high risk of error or possible failure. They are also likely to opt out of learning situations where they are making mistakes, struggling to complete work and the task is perceived as too challenging. When areas of weakness are exposed, these pupils may also reject support and assistance that could be critical for future success (Chiu, Hong and Dweck, 1997). These behaviours may hinder progress and engagement in learning opportunities, leading to less effective learning and less than optimum progress.

## 5.2.2 *Before and After the Intervention*

### 5.2.2a *Intelligence: 'Means you know a lot'*

Some pupils seemed to regard knowledge as indicative of intelligence.

*"When you are like really, really, really clever, and you know lots and lots and lots of stuff." (M2:6)*

Possibly, this provides evidence to support the self-theories' research of Dweck and colleagues, and the proposition that intelligence can be improved through acquiring knowledge.

### 5.2.2b *Intelligence: 'Can be demonstrated'*

Some pupils regarded intelligence as something that can be demonstrated or proved to others:

*"Intelligence is like how clever you are. If you're intelligent then you're really clever, really smart, really good at things, in lessons and stuff. You always get things right." (M1:6)*

There is an overlap here with learning which some pupils also considered was evident to others. This apparent link between learning and intelligence possibly implies that the pupils consider that successful learning leads to increased intelligence.

## 5.2.3 *After the Intervention*

### 5.2.3a *Intelligence: 'Can change'*

Some pupils now appear to view intelligence as something that can change through working hard and learning new things.

*"You can get more intelligent by learning stuff and so you can change it." (M2:16)*

What happens within the brain when someone learns was covered in the intervention, and this possibly led to some pupils assuming that learning helps your brain grow. As a result, they may relate this to becoming more intelligent. This possibly suggests that some pupils may have developed growth 'mindset' beliefs.

#### 5.2.3b *Intelligence: 'Is brain-based'*

Some pupils referred to intelligence as something that resides inside the brain, possibly suggesting that they had been influenced by the information about learning creating new pathways in the brain from the 'Brain Buzz' sessions:

*"...my brain can get bigger if I try to learn things. Anyone can get more intelligent I think..." (A2:22)*

#### 5.2.3c *Intelligence: 'Enables thought'*

Some pupils now linked intelligence with the ability to think quickly and effectively. Here intelligence seems to be perceived as the capacity to process information, remember facts and understand - in Matthew's words, *"Like a computer."*

*"...your brain makes connections and things. It like makes new paths and when you learn things, you remember things and they connect and you like, emm, know things." (M2:8)*

#### 5.2.4 **Supplementary Research Question 2 ~ Conclusion**

The responses in the two interviews appear to indicate that for most pupils their perceptions of intelligence have changed. They initially appeared to believe that intelligence is innate and unable to change, hinting at 'fixed' mindsets. They also seemed to view their own intelligence as limited by their SLC or other

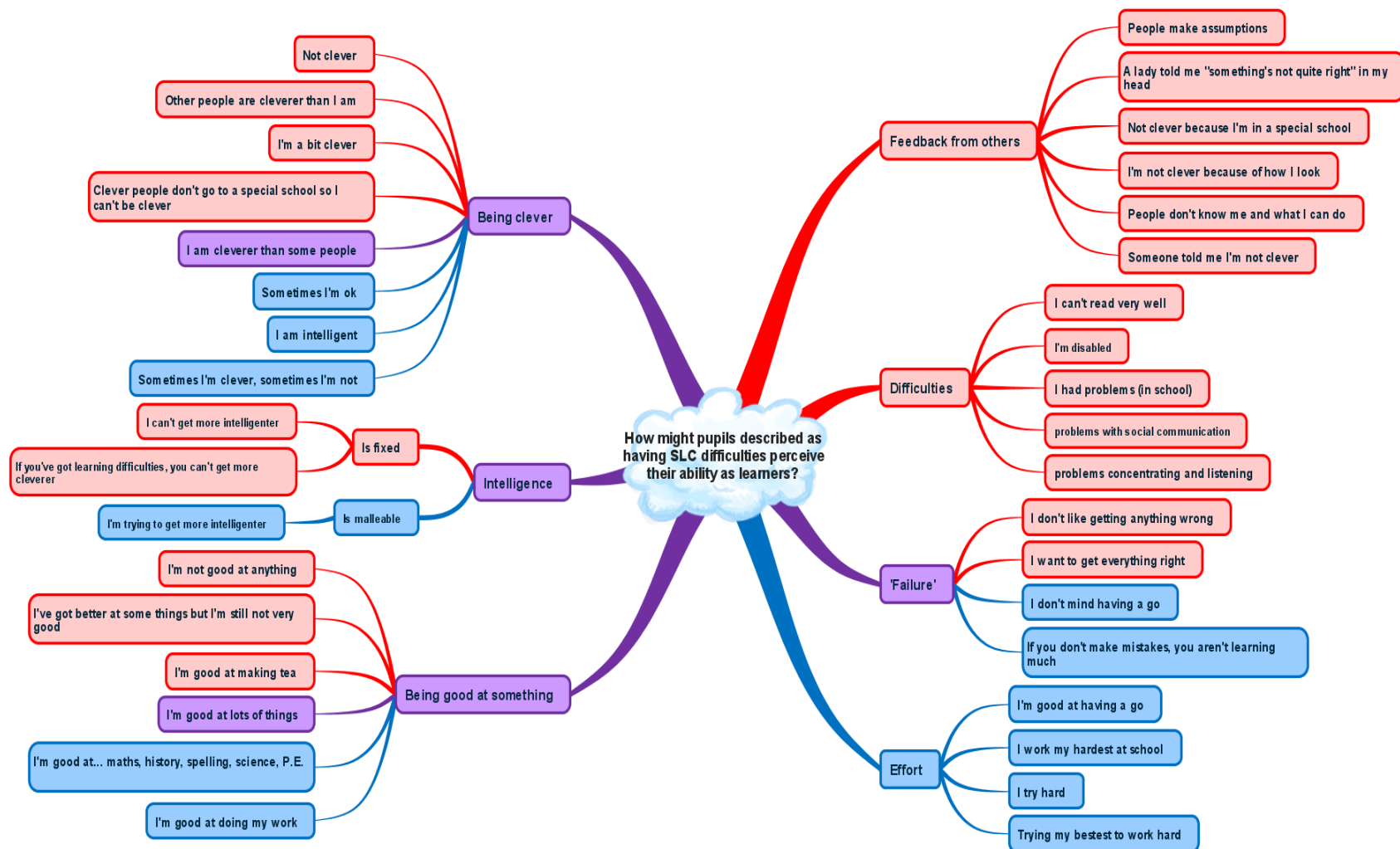
difficulties; some also mentioned other individuals with 'difficulties' and considered that these problems implied a limit to their intelligence.

Following the intervention, more detailed comments suggested that intelligence was something that helps people think and learn, and that it can change, increasing as people learn. This suggests that the intervention may have had a role in supporting pupils to develop 'malleable' mindsets and learn to appreciate that people become cleverer through acquiring knowledge.

### **5.3      Supplementary Research Question 3**

*How might pupils described as having speech, language and communication difficulties perceive their ability as learners?*

The thematic mind-map for research question 3 is shown overleaf.



Before intervention

Before and after intervention

After intervention

**Thematic Mind-map RQ3****Pupils' responses before and after the 'Brain Buzz' Intervention**



### 5.3.1 *Before the Intervention*

#### 5.3.1a *Self-beliefs: based on 'Feedback from others'*

Some pupils spoke about what they could remember people had told them about their difficulties or what they assumed others might say.

SF: What makes you think you're not clever Andy?

*"Emm. Well, I have been told that."* (A1:32)

*"People who don't know me very well don't think about what I can do. They don't know what I can do."* (M1:28)

These responses appeared to stem from the medical model of disability, where disability and difference is viewed as something unwanted, to be cured or at least ameliorated. The pupils who responded in this way seemed to regard their difficulties as unwanted, signalling that something was wrong, or was perceived by others as wrong.

#### 5.3.1b *Self-beliefs: based on awareness of 'Difficulties'*

The participants were aware of their SLC difficulties and, for some, their understanding of these difficulties appeared to imply a lack of potential. For example, Martin explained that he wasn't intelligent by reminding me that he couldn't read very well. Some pupils were able to list their difficulties:

*"Problems with....reading and 'social communications' like with Lisa. And concentrating and listening and something else as well."* (A1:36)

Lawrence (1996) suggested that pupils are unable to learn effectively if they have low self-esteem, and children who have low self-esteem are those who consistently fail and underachieve. This could lead to negative appraisals from themselves and others, creating a low self-esteem trap. How pupils understand

their labelled SEN and SLC difficulties, and how pervasive they believe these to be, may lead, in some cases, to lowered worth-based self-esteem.

### **5.3.2 Before and After the intervention**

#### *5.3.2a Self-beliefs: based on 'Failure'*

Before the intervention, pupils' fear of failure appeared more apparent. Individuals stated that they did not like to get things wrong, and seemed to seek answers to my questions that they thought I would consider correct. Possibly, for some pupils, past failures left a legacy of trying to avoid further failure by only getting answers 'right' even in situations where there is no single right answer:

*"You can certainly learn new things – I know you can definitely learn things. So that's the right answer."* (A1:22)

SF: Can you change how intelligent you are Andy?

*"No. Or maybe yes... or no. I think not."* (A1:24)

Following the intervention, some pupils mentioned that mistakes are part of learning and that they felt more able to 'have a go':

*"I think I'm good at having a go. I try hard."* (M2:28)

*"If you don't make mistakes sometimes you probably aren't learning much."* (M2:32)

This implies that these pupils may now be less concerned about failure and getting something 'wrong'. Although overall responses suggested that this is the case, at the individual level, some pupils still seem to want to know the 'right' answer and appear to fear failure. One interpretation is that their past experiences or the nature of their SEN means that for them to increase their confidence to 'try', when they encounter challenge, may be difficult.

### 5.3.2b Self-beliefs: based on 'Intelligence'

Pupils mentioned intelligence as an important factor when considering their own abilities. Before the intervention, pupils' responses seemed to suggest that they considered intelligence (cleverness) as fixed, innate and unable to change. As a result, pupils did not think that they could become more intelligent.

SF: Can you get more intelligent Andy?

*"Emm... maybe, maybe not. How can I? I don't know, maybe." (A1:28)*

Following the intervention, most pupils seemed to consider intelligence as something they could at least aim to improve; they also had some ideas about how to do this (for example, they could try hard to learn new things):

*"Yes I think so, but I have to try hard and learn stuff and work hard and stuff. But yes I can get more intelligenter ... (laughter) that's not a word! You see I said that before. More intelligent! Well I've learned something today, just now – intelligenter isn't a word!" (laughter). (M2:26)*

### 5.3.2c Self-beliefs: based on 'Being clever'

Pupils generally did not consider themselves to be very clever. Their beliefs seemed to stem from their understanding of the nature of their difficulties, or from the feedback of others.

SF: How intelligent do you think you are Martin?

*"Not very! (laughter) Well you know Sue, you know that I can't read very well." (M1:20)*

SF: Does that mean you're not intelligent though Martin?

*"Well I think most people would think so. I know things but I don't think you'd be in a special school if you were very intelligent." (M1:22)*

One pupil mentioned that they were cleverer than another pupil in the class, but that attending a special school implied that pupils could not be clever. This response suggests that there is a possible stigma to attending a special school.

All the pupils in this study may believe that they are less capable than other children of their age, and have less potential to succeed, simply because they attend a special school. They also have labels naming their SEN. Solity (1991) suggested that labels have the power to devalue and discriminate, and can mark out individuals as different in negative ways. If pupils think this is true, then the participant's self-beliefs may be affected, possibly leading to them thinking that they are not clever or not capable of becoming cleverer.

#### *5.3.2d Self-beliefs: based on 'Being good at something'*

In the first interview, pupils appeared to struggle to find much to say when asked what they were good at. Those who did respond often named non-academic activities such as making a cup of tea or playing football. In the second interview some pupils could name academic subjects or things they do at school (such as spelling).

*"Football." and "Swimming ... P.E., maths, science" and "Maths like sums and that." (W2:30/32/34)*

Possibly more importantly, pupils stated that they were good at doing their work and/or were good at trying; behaviours like this may help them become more effective learners. Alternatively, it may be that, because the pupils had been asked the questions before, they were better prepared to answer.

### **5.3.3 After the Intervention**

#### *5.3.3a Self-beliefs: based on 'Effort'*

Following the intervention, pupils mentioned that trying, working hard and 'having a go' were important when trying to learn, and that learning new things was a possible way to become more intelligent.

*“... because if you work hard, I think you will change. You can work harder to become more intelligenter.” (A2:8)*

This links to key messages they encountered in the ‘Brain Buzz’ lessons.

#### **5.3.4 Supplementary Research Question 3 ~ Conclusion**

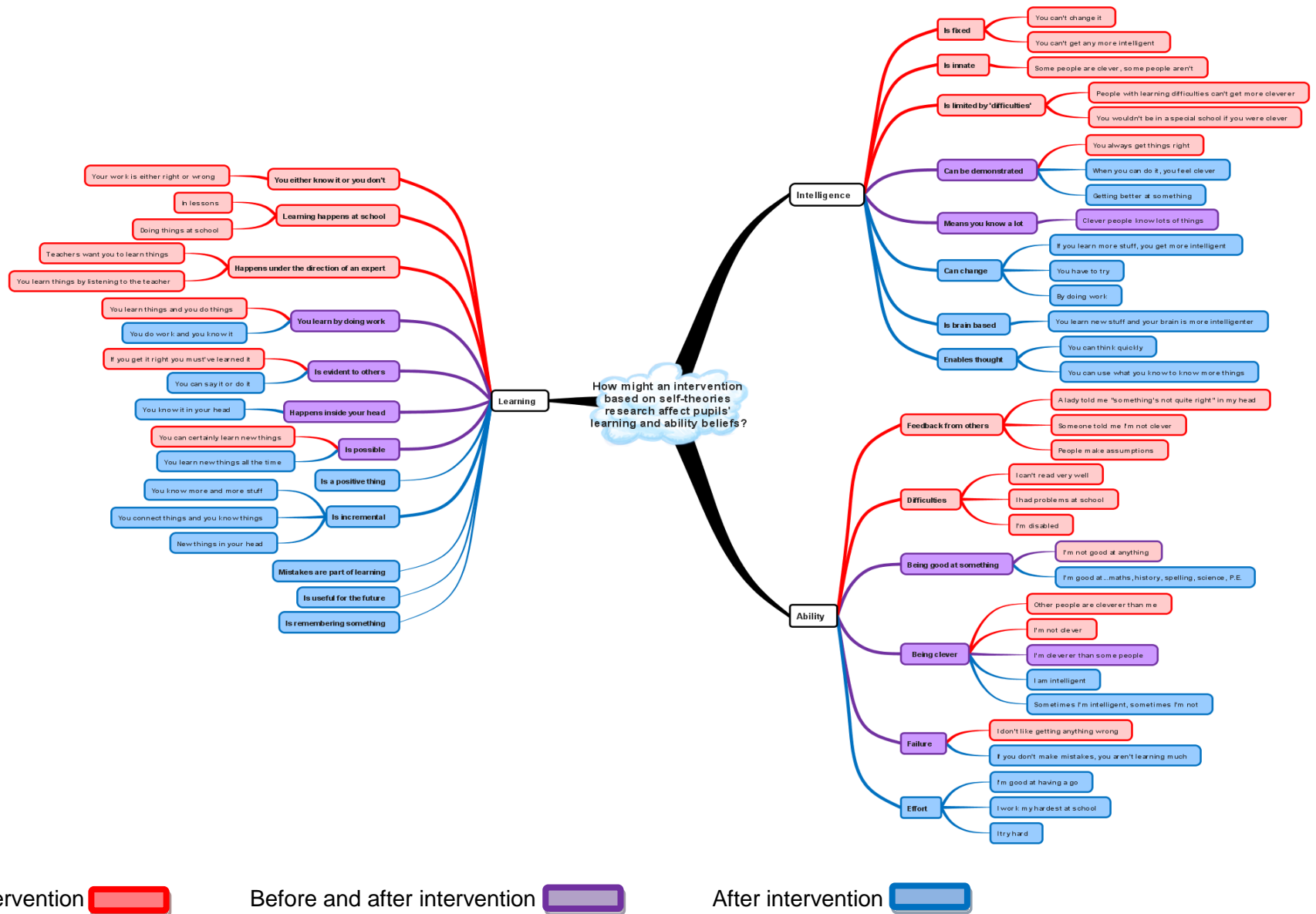
Pupils’ self-beliefs also appeared to change after the intervention. In the first interview, some pupils spoke of their difficulties limiting intelligence, of themselves or others. They found it difficult to identify things, particularly academic activities, they were good at. After the intervention, pupils could mention things they were good at, including subjects at school and trying hard.

#### **5.4 Supplementary Research Question 4**

*How might an intervention based on self-theories research affect these pupils’ learning and ability beliefs?*

The thematic map for supplementary research question 4 is shown overleaf. Individual responses of all the pupils, grouped according to theme, are shown in Appendix 12.

The combined findings represented in this thematic mind-map suggest that pupils changed their understanding of learning, intelligence and their self-beliefs between the first and the second interview, over the course of the intervention.



**Thematic Mind-map RQ4**

**Pupils' responses before and after the 'Brain Buzz' Intervention**

The self-theories research base (for example, Dweck and Leggett, 1988; Hong, Chiu and Dweck, 1997) suggests that individuals who hold a 'growth mindset' are more willing to accept assistance when they experience academic difficulties; this is because they believe that they can increase their ability through increased effort, and that there is always potential for intellectual growth. This leads to more effective engagement in learning which lead to better learning outcomes. It appears possible that, following the intervention, some pupils in this study developed a growth mindset:

SF: 'You can learn new things, but you cannot change how intelligent you are.'  
Is that right?

*"Yes you can, because if you learn new maths, your maths is intelligent. You can learn more words and then your spelling is intelligent. So you can learn things and get more intelligenter."* (A2:18)

If self-theories research is relevant to these pupils, these beliefs have the potential to lead to more effective learning behaviours.

#### **5.4.1 Supplementary Research Question 4 ~ Conclusion**

These findings suggest that the intervention may have had some impact upon the pupils' understanding of learning, intelligence and their self-beliefs. For example:

SF: "What do you think learning is?"

*"What do I think learning is? Well...I think learning is when you do things at school and the teachers want you to learn things.... in the lessons and then you learn things and you do things and that's what learning is.... in your head. Hmm...you might know something or not know something."* (A1:6)

*"Trying to make you clever for the future. You know stuff in your head."* (A2:2)

SF: Do you think that "Your intelligence is something that you can't change very much?"

*"I don't think you can get any more intelligenter...can you? You can't get more intelligenter. I don't think so anyway." (M1:12)*

*"No, I think if you learn more stuff, you get more intelligent." (M2:10)*

SF: "What do you think you're good at?"

*"Good at? Emm ... Nothing. Emm... well I don't think I'm good at anything in particular." (M1:44)*

*"...well Sue I think I'm good at having a go. I try hard. I'm good at wheelchair football and I'm good at talking (laughter) as you know!" (M2:28)*

I do not suggest that the changes discussed are only due to the intervention; however, I believe that my findings suggest that an intervention based on self-theories research may have some relevance to these pupils. Responses suggest that some pupils had learned new information from the 'Brain Buzz' lessons and, possibly, they were able to apply this learning to themselves. This potentially could lead to increased effort and more persistent and resilient classroom behaviours.

## **5.5 Main Research Question**

The overarching, main research question asks:

*Does self-theory research have any applicability to pupils with SLC difficulties?*

The pupils' responses, initially explored with regard to the four supplementary research questions, suggests that self-theory research may be applicable to pupils with SLC difficulties. In order to consider this from another perspective, involved staff were interviewed on two occasions and responded to questions similar to those asked of the pupils (see Appendix 8). Staff responses suggest that both their own understanding of intelligence and their perceptions of the behaviour of the pupils in class appeared to alter between the first and second interviews.



The responses from the interviews with involved staff are summarised in Table 3. Comments made regarding staff's personal understanding of the questions asked are coloured pink and their perceptions of the pupils are coloured green.

Interview 1 Before the intervention	Interview 2 After the intervention
<b>Learning:</b> <ul style="list-style-type: none"> <li>• Develops over time</li> <li>• Is easier for some pupils than for others</li> <li>• Is easier for more able pupils</li> </ul>	<b>Learning:</b> <ul style="list-style-type: none"> <li>• Pupils are better at noticing and assessing their own learning and progress</li> <li>• Pupils are more motivated to learn</li> <li>• Is something every pupil can do but is easier for some pupils than for others</li> </ul>
<b>Intelligence:</b> <ul style="list-style-type: none"> <li>• Is fixed</li> <li>• Is innate</li> <li>• Is knowable</li> </ul>	<b>Intelligence:</b> <ul style="list-style-type: none"> <li>• Can be improved by learning</li> <li>• Can be improved through effort</li> <li>• Is innate but it can be improved</li> </ul>
<b>Self-beliefs:</b> <ul style="list-style-type: none"> <li>• Pupils fear failure</li> <li>• Pupils lack confidence</li> <li>• Pupils opt out</li> <li>• Pupils sometimes don't try as hard as they could</li> <li>• Pupils seek help at times unnecessarily</li> <li>• Pupils can seem helpless or hopeless</li> <li>• Pupils can lack motivation</li> </ul>	<b>Self-beliefs:</b> <ul style="list-style-type: none"> <li>• Pupils appear more confident</li> <li>• Pupils are more empowered in their learning</li> <li>• Pupils are willing to try harder for longer before seeking help</li> <li>• Pupils are more willing to accept mistakes as a part of learning</li> <li>• Pupils are more motivated to work hard and try hard in order to learn new things</li> </ul>

Staff personal understanding



Staff perceptions of the pupils



**Table 3 Staff responses before and after the 'Brain Buzz' intervention**

### **5.5.1 Staff Responses: Their Understanding of Terms**

Staff responses differed in the first to the second interviews. Some of their responses mirrored those previously discussed regarding pupils' responses. A notable difference between the staff and pupil responses concerns their understanding of intelligence which, initially, for both pupils and staff, appears to

be fixed, innate and knowable. Possibly, this indicated 'fixed' mindset beliefs with intelligence viewed as a measurable entity.

After the intervention, the staff appeared to agree with the pupils that intelligence can be improved by learning new things and through personal effort which possibly indicated 'malleable' mindset beliefs. However, staff responses suggest that they still consider intelligence to be innate.

### **5.5.2 Staff responses: *Perceived Changes in Pupils' Learning Behaviour***

The staff observed that the pupils were better at noticing and assessing their own learning and progress following the intervention:

*"Well I think the biggest difference is that they've all become far better at noticing learning – what they've learned rather than what they've done. Before if you said what have you learned today they'd probably have told you what they did in a lesson, like an experiment in science, but couldn't really pinpoint what they learned by doing it." (T2:24)*

*"It's like things are possible – you know? Like they're less stuck, "fixed" (air quotes) by their disabilities... If they work hard and try hard they can make progress and get better at things" (T2:26)*

If this is the case then it is possible that the pupils may develop improved self-efficacy, defined as "beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments" (Bandura, 1997; pg. 3). Self-efficacy beliefs are thought to influence the choice of goals and persistence at reaching those goals, as well as influencing reactions to setbacks (Maddux, 1993; 2002). The influence of perceived self-efficacy as a significant predictor of learning behaviour appears to be well-supported in the literature (Kennett and Keefer, 2006) and, if pupils are more able at self-assessing and noticing progress, then this may impact positively on learning behaviours such as motivation. Staff responses suggested that they believed pupils seem more

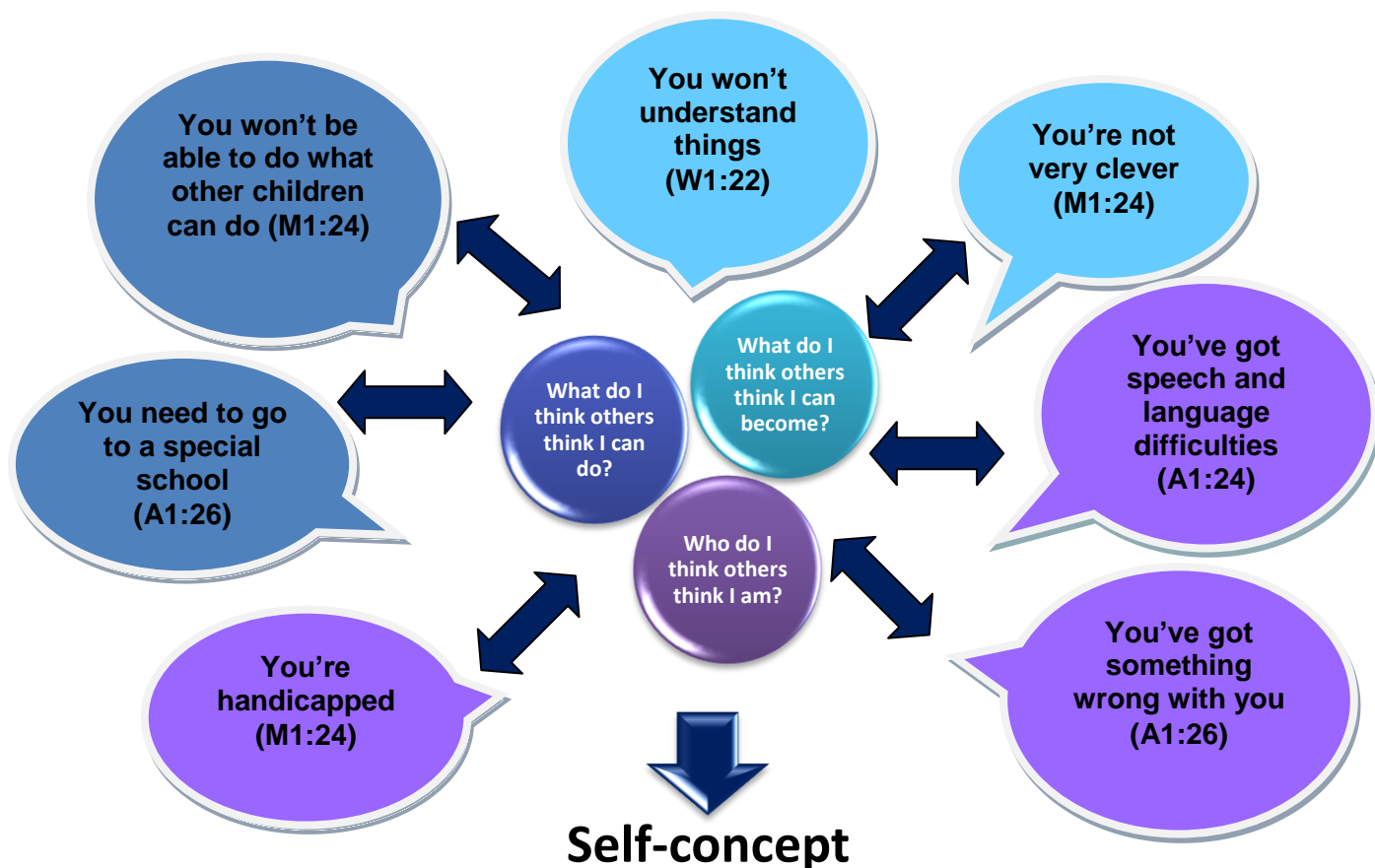
motivated to learn after the intervention. This may be an important development which would help pupils to both engage and remain engaged in learning opportunities. Staff noted that this may help pupils learn. As Tom said:

*Pupils are “much more aware of what they learn in a lesson and because of that they are better at assessing their own progress which I think is great.”*  
(T2:24)

Therefore, overall, involved staff considered that the pupils had developed some learning behaviours that, in their opinion, helped pupils improved their ability to learn.

### **5.5.3 Observed Changes in Self-beliefs**

Some responses provided by pupils in the first interviews suggested that some pupils had poor self-concept and low self-esteem. This could be due to negative school experiences; for example, feedback from others through the process of assessment, their understanding of their labels or experiencing failure in learning opportunities. Figure 9 illustrates this overleaf.



**Figure 9** *Self-concept conceived as the combination of individual's perceptions of how they believe others regard them based on the messages received and a two-way process of self-evaluation and comparison.*

Figure 9 is based upon Figure 4 (Chapter 2, pg. 31). The words in the diagram are those actually stated by participants in the study in the first interview (or paraphrases of their words). The phrases seem to relate to their perception of how 'others' regard them. These pupils may have developed poor or fragile self-concepts based on feedback, which may also have affected their self-esteem.

Following the intervention, staff suggested that the most pupils appeared more confident in class. As a result, staff considered that they were more empowered in their learning and that this confidence helped the pupils engage in lessons. The conclusions of staff are based on staff observation and interpretation of pupil behaviour:

*“Some pupils seem to have more confidence in lessons and have a willingness to learn and try. Some seem to really want to learn.” (L2:28)*

Staff considered that the most pupils appeared to be more willing to try harder for longer periods of time before seeking help, and seemed more willing to accept making mistakes as part of the learning process. They also suggested that the pupils are more motivated to work and try hard in order to learn new things, which suggests that the most pupils have developed more confidence in their ability to learn.

Research suggests that children react to failure in two ways: by trying harder or giving up (Dweck and Reppucci, 1973). Some participants in this study appear anxious to avoid mistakes in lessons; often seeking reassurance or assistance even when none is actually required and sometimes giving up rather than persevering. Following the intervention some pupils are perceived by staff as more willing to persevere, trying harder for longer periods of time and more willing to accept mistakes. This may help them learn more effectively. As a result of these changes, one member of staff suggested that some pupils may have higher self-esteem and improved self-concept.

*“I think that them doing better in lessons and possibly achieving more, being a bit more successful in class, helps them feel they’re better at other things too. Well even them believing that would help them, I think, wouldn’t it? What the kids believe about themselves is important. Their self-esteem seems higher and I think that could be because they don’t write themselves off. They think they’re better than they were.” (L2:32)*

#### **5.5.4 Conclusions**

Based on these findings, self-theories research base may have some applicability to pupils with SLC difficulties and, possibly, other pupils categorised as having SEN. Pupils with SLC difficulties arguably face considerable issues

accessing the language and associated concepts of the 'Brainology' programme based on self-theories research. If some of these pupils have been able to develop knowledge related to a malleable mindset because of this intervention, in spite of these issues, other pupils may also be able to do so.

It is important to recognise, however, that not all of the pupils in this study appeared to be able to access all aspects of the intervention or respond to the interview questions with ease. However, this does not mean they did not benefit from the intervention. There are methodological issues which need to be considered more fully and these will be addressed in Chapter 6.

## **5.6 Overall Conclusion**

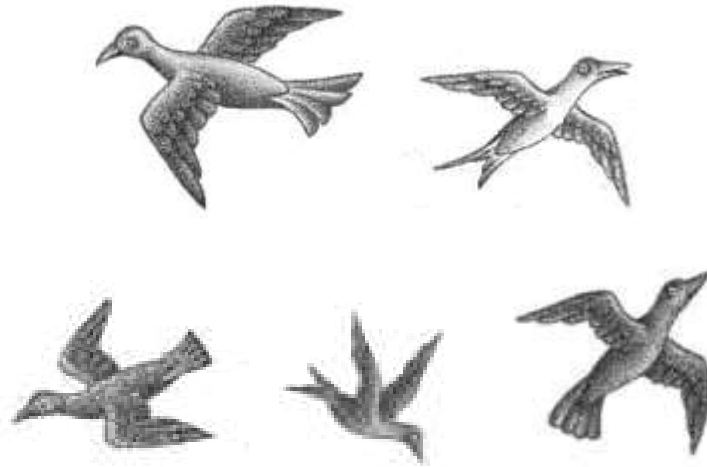
Overall, findings suggest that self-theories research may be applicable to and possibly has much to offer pupils with SLC difficulties. The participants' understanding of intelligence and learning appear to have changed over the course of the intervention, possibly leading to classroom learning behaviours that are more positive in terms of fostering motivation, self-efficacy and resilience.

Some pupils appeared to think they were not as capable or intelligent as their mainstream peers, and could explain why they held these beliefs. The intervention appeared to persuade pupils that factors they could control, such as effort, were more important than any innate ability they believed they had, and this new understanding may possibly lead to more helpful learning behaviours in the classroom.

In Chapter 6 I draw these findings to a conclusion and discuss issues of quality with specific regard to a critique of the methods used and reflexivity. The

chapter will also consider the implications of this study for professional EP practice and possible limitations of the study. Finally, potential next steps are considered that may support further exploration of factors relevant to the application of self-theories research to a 'special' population.

## **CHAPTER 6: CONCLUSIONS**



*“And so the strip of paper on which they were drawn disappears.”*

### **6.0 Introduction**

This chapter considers the main finding of my research, a critical overview of the methods used, my role within the research process, issues of quality, implications for EP practice and suggests possible next steps.

### **6.1 Main Finding**

In this section I consider the main finding related to the overarching research question:

*Does self-theories research have applicability for children with SLC difficulties?*

I explored this by considering four supplementary questions and by seeking responses to questions before and after an intervention based on the research base of Dweck and colleagues. Overall, findings obtained suggest that self-theories of intelligence research may have some applicability beyond the mainstream learning contexts considered by Dweck and colleagues. This finding was based on the ways in which pupils' responses differed between the first and



second interviews. Changes suggest that the pupils' perceptions possibly altered due, in some part, to the intervention. This may have affected how pupils perceive intelligence, their ability beliefs and their understanding of the nature of learning itself.

This finding is also supported by involved staff who reported that the pupils' behaviour in learning situations had also changed; specifically, they felt that the pupils had accepted the need to try hard and persevere in order to learn. In addition Tom, the class teacher, described how some pupils now appeared to accept that failure can be a 'normal' part of the learning process. He also stated that he believes that pupils are now more aware of learning and assessing their own progress:

*"I think the biggest difference is that they've all become far better at noticing learning – what they've learned rather than what they've done. Before if you said what have you learned today they'd probably have told you what they did in a lesson, like an experiment in science, but couldn't really pinpoint what they learned by doing it. Now they're much more aware of what they learn in a lesson and because of that they are better at assessing their own progress which I think is great. I also think some kids are more confident now too."*  
(T2:26)

However, findings also revealed that some of the participants struggled to answer some of the interview questions. It is not possible to be conclusive about the reasons for this. However, there may be limitations regarding the chosen methods which will be addressed in the next section.

## **6.2 Critical Consideration of the Research Methods**

During the research process I became increasingly aware of how challenging it was to seek answers to my main and supplementary research questions. In particular, issues revolved around the difficulty some pupils had in responding during the interviews. These issues are now considered in more detail.

### **6.2.1 Use of interviews**

In order to understand the findings and the challenges I faced engaging the pupils in this research, I reflected upon the methods I chose to collect the data. Due to my experience in Peachtree School, I believed before the intervention that my familiarity with the pupils would allow me to understand their statements within a semi-structured interview situation and, therefore, produce an accurate record of what each participant said. However, this choice may have affected findings and the participants' opportunities to engage and share their opinions and views.

#### **6.2.1a Pupils**

I sought and valued the contribution of all participants in this study, and consider that there is much to be learned of pupil's experiences, views and perceptions by listening to the children themselves. My stance was that all pupils have a right to be heard irrespective of their SLC difficulties or any problems experienced by the researcher in interpreting their words.

Interviewing pupils before and after an intervention was one way to access data possibly relevant to the main research question. However, it may be that this data collection method was not widely appropriate. While some pupils used spoken language effectively, others had more limited vocabularies and/or articulation difficulties. A central problem, in seeking answers to my research questions via interview, was the need to use language, both to ask the questions and to explain the responses of the participants. The difficulty of doing this with children with SLC difficulties may help explain why they have been more excluded than other groups from research (for example, Disabled people using Scope services,

2002). I considered this prior to carrying out the research but decided that this is also an issue for other research methods, as discussed in Chapter 3.

For example, it was more challenging to gather information from Carl as his responses were minimal. This could indicate that either he did not understand the questions, and/or he was unwilling or unable to respond. As Carl has both expressive and receptive language difficulties, asking him questions and obtaining meaningful answers was perhaps optimistic, as both his understanding and his ability to verbally respond appear to limit his ability to engage. The difficulty with seeking his views is that, fundamentally, any method is dependent upon asking and answering questions and interpreting his responses. Whether Carl reads the questions, listens to questions or looks at symbols or pictures, language mediates the research process. Carl's ability to read is limited, he recognises approximately 40 high frequency words; therefore, a written questionnaire would need to be read aloud to him and would create the same issues as a verbal method. Using a pictorial system of questioning and response would similarly depend upon his ability to understand the pictures and the questions asked. My observations and those of the staff working with him suggest that few noticeable changes were evident in his learning behaviours in class. This may imply that research on self-theories has little applicability to Carl; alternatively, it suggests that there could be issues concerning the accessibility of the interview or the intervention. Matthew also struggled to answer questions with his expressive language difficulties appearing to affect his ability to respond, with many of his answers being single words.

Some caution is also needed when interpreting the pupils' responses with respect to whether they told me what they actually believed or what they thought I would

accept. Issues also remain regarding whether the pupils said what they meant to say and whether their meaning mirrored my understanding of their words. However, if pupils' receptive language difficulties do not allow them to understand a question, or their expressive language difficulties do not allow them to express their opinion, this does not mean that these pupils do not have an opinion or that they actually hold a different opinion to the one they state. I consider that conducting research with children or adults with SLC difficulties is potentially complex and depends as much on the skills of the researcher as the methods used. In this research, I recognised the pupils' perspectives as valid 'evidence' and I sought to check my understanding of each individual's responses, even though the process of checking may have only served to compound the pupils' misunderstandings, or my own. From my epistemological stance, I may only offer my interpretation of the pupils' statements. Perceptions of their utterances, my research data, from a different viewpoint could tell a different story in different contexts or at different times.

The understanding of the vocabulary used within the interviews was a further issue, with the word 'intelligence' causing the most problems. To overcome this, I needed to explain that 'intelligent' and 'clever' meant very similar things. Following this, pupils generally used clever or cleverness rather than intelligence. As a result, I felt this was a term they understood or, at least, were more familiar with. Although what is important is the pupils' understanding, it cannot be assumed that changing 'intelligent' to 'clever' is only a superficial difference, as these terms are semantically different and are not just different words used to express an equivalent construct. Pomerantz and Saxon (2001) observed that differing conceptions may be related to various different pupil attitudes, beliefs

and understandings and alternative words may produce different understandings. I believed in the interviews that I needed to use 'easier' words to facilitate understanding, and I accept the possible consequence that this may have affected participant responses, and, consequently, my findings.

The questions asked in the interviews elicited a high number of 'yes' or 'no' responses, particularly from Matthew, the pupil with the most significant expressive language difficulty. Over half of his responses were 'yeah' or 'no' and he also responded 'dunno' more than any other pupil. Whether these responses were a true reflection of his thoughts, beliefs and opinions is debatable. Certainly the questions asked and the interview situation did not help him respond more widely or openly than this. Matthew's inability to verbalise clearly because of his severe verbal dyspraxia, adversely affected my ability to understand and, subsequently, analyse his utterances; this caused concerns regarding how appropriate it was to use these methods to seek his thoughts and opinions. However, before the interviews, I felt confident that I could understand Matthew's speech (and I still believe this is largely true). However, what I did not appreciate was his lack of confidence when expressing himself 'on tape' and his reluctance to answer my questions. Recording Matthew seems to have closed down his verbalisations, limiting his contributions largely to single word responses. This was something I had not considered beforehand. In retrospect, speaking with him in a classroom environment over an extended period of time with less pressure on him to respond quickly may have helped him respond. As Brewster (2004) suggests, accessing the views of individuals with little or no speech should be "an ongoing process rather than regarding an interview as a one off event. Thus, interpretations based on views expressed within a setting of 'longer term and

personal involvement' (Lewis 2002, p. 113) will offer greater reliability." I will consider this further later in this chapter.

Three pupils, Carl, Matthew and John, appeared to be uncertain about their answers, particularly in the first interview. Whether their uncertainty resulted from their SLC difficulties or the situation is debatable. It could suggest that some pupils with SLC difficulties are incapable of understanding questions regarding themselves and their beliefs. However, I believe that this is less credible than them not knowing how to answer these particular questions, by either finding the right words to effectively communicate their opinions, or not being able to judge what the 'right' answer might be.

One further point relates to the experience, skill and knowledge of researchers regarding children with SLC difficulties. In order to ask questions in an accessible way and understand what participants may mean when they answer, researchers need to have developed strong relationships, rapport and have 'attuned' their ear to the possible idiosyncrasies of each child's speech. This is not generally easy; nor do researchers necessarily have easy access to this population over an extended period of time in order for these skills to develop. Staff at Peachtree School have vast experience of working with these pupils, and asking them very similar questions to those asked of the pupils allowed me access to the observations and opinions of adults with knowledge, skill and 'attuned ears' gained within the research context. I consider this further in the following section.

#### *6.2.1b Staff*

I also explored staff perspectives regarding possible changes that they had noticed in pupils' learning behaviours in class such as willingness to try, resilience

to setbacks and difficulties, levels of engagement and motivation, as pupils may not notice or comment on this. Potentially, staff are well placed to notice such changes and comment on them.

The staff interview responses provided further information about the main research question. Their observations of the pupils everyday in the classroom gave them a unique perspective. Staff feedback suggested that all of the participants, except Carl, altered their learning behaviours and developed attitudes to learning opportunities that seemed to indicate less fear of 'getting it wrong' and more emphasis on 'trying hard'.

*"The kids talk about needing to try in class now. Trying hard seems to be important now, whereas I can't remember that was something they'd have even mentioned before. I know I did! But not so much them. Martin asked me to check something the other day and Matthew told him to try harder! (laughter)" (L2:26)*

The use of interview as a method of data collection may not have been straightforward for Matthew. However, staff responses suggest that he was engaged in the intervention. The next section considers this further and discusses whether pupils were able to access the intervention in similar ways and whether this may also have affected findings.

### **6.2.2 Accessibility of the research process**

A high level of access to and knowledge of the participants was necessary to enable individuals with SLC difficulties, some whom cannot use speech fluently, to participate in the research. The possible ease of research participation for those individuals who can understand and use speech fluently, inadvertently may exclude those individuals who cannot, (such as some pupils in my study) (Morris, 1998, 2003; Rabiee, et al., 2005). An important outcome may be the expansion

of the experience base when engaging children with SLC difficulties in research. In my opinion, it is important that knowledge and understanding of the participants is as rich and complete as possible, to avoid what they are trying to say being disregarded or misunderstood. Although I believed myself to be a 'good' communicator at the start, I was aware that my communication skills with each individual improved over time as my ability to wait, tolerate silences, interpret speech and particularly read subtle non-verbal communication increased; this was something I had not anticipated beforehand.

The few qualitative studies that have been undertaken with children who struggle to communicate have discussed the issue of researcher communication skills to some extent (e.g. Davis, Watson, Corker and Shakespeare, 2003; Morris, 1998; Rabiee et al., 2005). These studies have emphasised that time is needed to get to know the children and suggest that decisions regarding methods and systems of communication are more appropriate when researchers have taken time to become familiar with participants. In my experience, this is vital but there is more to consider. As an adult without a disability, I cannot claim to know the lived experience of a teenager stated to have SLC difficulties. However, for me as a researcher, the process of engaging with these individuals gave me a new understanding of their perceptions and thoughts and challenged my preconceptions. This leads me to suggest that familiarity could lead researchers to make assumptions. This needs to be considered as a possibility and addressed.

In this research I have posed questions regarding the applicability of self-theories research to pupils with SEN, specifically pupils with SLC difficulties. As my research does not attempt to "draw grand conclusions that can be transferable to



other contexts” (Cho and Trent, 2002; pg. 328), the objective accuracy of my findings is not relevant as they reflect only my interpretations and constructions of events and meaning from the pupils’ responses. However, I consider that the basic premise of self-theories research may have applicability, and possible positive implications, for wider pupil populations, including pupils who are considered to have SLC difficulties. Although my efforts to engage with pupils were problematic, I believe that their responses have allowed me to explore the research questions and draw tentative conclusions.

For two pupils, Carl and Matthew, some of the responses were limited either because of the questions asked, the situation or the nature and/or the severity of their SLC difficulties. This raises questions regarding data quality. When considering practitioner research, Groundwater-Smith and Mockler (2007) suggest that “an important outcome is that the knowledge that has been developed is acted upon. Knowledge must be put to good use.”

Knowledge developed through this research has highlighted the difficulty one participant, in particular, may have had engaging with the data gathering process. This ‘knowledge’ would alter how I would go about conducting similar research in the future. For example, although I consider the intervention to have been largely appropriate I would omit recording lessons on video; I would also change the data gathering process to gather pupils’ perceptions less formally. I would consider doing this in everyday lessons, as “an ongoing process” rather than in a more formal, possibly intimidating, interview, (Brewster, 2004; pg. 169) I would ask similar questions but would simplify the language and restructure the syntax to support pupils’ responses. In gathering data in this way, I would hope that the

opportunity for children with SLC difficulties to express themselves more fully could be increased.

The purpose of my research was not only about asking questions and obtaining answers; it also sought to engage pupils in a process that may help them become more productive and effective learners. However, it is possible that the language used during the intervention, specifically the 'Brain Buzz' sessions, was not equally accessible to all pupils. For example, Carl was observed to be largely unaffected by his involvement, with staff noting that there was very little change in his learning behaviours in class. Staff considered this to be due to the severity of his difficulties. However, it may be that these observations were affected by their expectations of Carl or his inability to display behaviours that they could interpret as resulting from the intervention.

*"Not everybody though. I think it's not affected Carl very much. But I'm not certain that much could."* (T2:26)

SF: So Carl is "fixed" (*air quotes*) then?

*"(laughter) Yes – I see you got me there! No he's not I'm sure but maybe he needs more help to see his own potential!"* (T2:28)

If staff observations are accepted, then this may imply that there are limits to the applicability of an intervention based on self theories research.

### **6.3 Reflexivity**

My privileged position, in terms of my relationships, access, experience and status in Peachtree School, allowed me to design an intervention involving staff and pupils, running over a half-term. I realise that it may have proved very difficult for another researcher to gain such open access to a school context, pupils and staff time and parental goodwill. My position as both researcher and senior

manager afforded me a high level of access and self-determination. This privileged position brought with it heightened responsibility. In my research, there was a clear discrepancy between my age, status and power in school and that of the participants, pupils and staff. This necessitated not only careful consideration regarding methods and process, but active consideration during the process of writing up the thesis. Throughout the research process and the writing of this thesis, I have attempted to pay close attention to my involvement in all aspects of the process; in addition, I have considered the impact of both my involvement and issues relating to reflexivity throughout this study (for example, Mathner and Doucet, 1997; Lather, 1991). In this section, I consider issues of reflexivity in relation to pupils and staff.

### **6.3.1 *Reflexivity in Relation to Pupils***

Children are potentially vulnerable to the unequal power relationship between themselves and adult researchers (Alderson and Goodey, 1996; Boyden and Ennew, 1997). Children experience this because many of their activities are controlled or limited by adults: “The main complications do not arise from children’s inabilities or misperceptions, but from the positions ascribed to children,” (Alderson and Goodey, 1996; pg. 106). Connolly (1998; pg. 189) suggests that “the problem becomes one of being critically reflexive and forever questioning your role as a researcher and your relationships with those you have researched”.

A general concern for researchers is not to impose their own views and to facilitate participants to express their perceptions freely. However, children may not be used to being taken seriously by adults and, also, they may not be used

to expressing their views freely. For researchers, the challenge is how to encourage children to express their views to an adult researcher and how to “maximise children’s ability to express themselves at the point of data-gathering; enhancing their willingness to communicate and the richness of the findings” (Hill, 1997; pg. 180).

I am acutely aware of the unequal power dynamic between myself as researcher, an adult and teacher in charge, and the researched, children with SLC difficulties and pupils in this school. My research needed to allow children to express themselves freely whilst supporting their communication needs. Although all children were asked the same questions, it was necessary to repeat and rephrase questions in response to their feedback to support their understanding of the questions, and also provide the structure pupils needed to feel secure and comfortable to speak freely. Also, I intended to provide a comfortable and secure environment for the children to take part; however, I cannot simply assume that I managed to do this. For example, this exchange made me stop and reconsider my role within the research process:

SF: And what do you think intelligence is?

*“What intelligence is? What is intelligence? Emm... well I suppose it’s being a clever person, being clever. Is that right? Intelligent and clever is the same? I think that’s the same. Is that the same?” (A1:08)*

SF: I don’t think there is a right or a wrong answer here Andy. I just want to know what you think. Please don’t worry about it. Do you think that ‘You only have a certain amount of intelligence and you can’t do very much to change it?’ Is that right or wrong? What do you think?

*“I think it could be right. It might be right. Intelligence and clever? It is right. I think so.” (A1:10)*

SF: Do you know why you think that?

*“Well....no....no not really.” (A1:12)*

Andy appeared to me to be anxious that a 'right' answer was expected from him, but he was unsure what this 'right' answer was. This expectation was possibly influenced by the context of the research and my position in this context. His anxiety made me acutely aware that pupils were potentially vulnerable to the unequal power dynamic between me, an adult researcher and teacher in charge, and them, pupils and participants in my research, and this may lead to possible stress that I needed to be mindful of.

The use of clear language is important in any research; however, researchers appear to be more conscious of this when undertaking research with children (Ireland and Holloway, 1996). Children may have a more limited vocabulary and they may use language that adults do not understand giving rise to a language dilemma for research with all children. The questions used in the semi-structured interviews were chosen to mirror Dweck's own; however, because of the potential language problem, it is possible that the participants might have misunderstood the meaning of some words. I attempted to ask questions that were as clear as possible and I tried to support individual understanding by rephrasing or substituting alternative, possibly 'easier', words or phrases. I also tried to scaffold questions by breaking them down into sections, repeating or rephrasing, repeating answers or adding detail (Appendix 6). I hoped this would help pupils engage in the interview and support them to provide as full responses as possible. However, in doing this I realise that I may have imposed my own understanding and expectations on the pupils who, in consequence, might have altered their responses or revised their own understanding.

### **6.3.2 Reflexivity in Relation to Staff**

Similarly, my position in school may have affected the responses of the staff who may have given their answers based on what they believed I wished to hear, rather than the 'truth' as they perceived it. I consider that I have good relationships with the staff involved, but I may have unwittingly imposed a desire for my research to succeed on staff, and this may led to them altering their responses in a desire to accommodate. I attempted to address this during the research by openly discussing this possibility with the staff, to ensure that they understood that I was aware of this as an issue, and that what I needed from them was their true opinions and perceptions. As a result, I consider that the staff offered their unfiltered perceptions, although I accept that this may not be the case.

This thesis was generated from a need to complete an extended piece of 'new' research to complete a doctorate. Deception, either my own or the participants, obscures the validity of my findings. Adopting a reflexive approach helped me appreciate that personal ambition could lead to research findings that are invalid, if I strove to achieve outcomes with a disregard for the 'truthfulness' of my findings.

### **6.4 Issues of quality: how 'good' is this research?**

One of the biggest challenges facing qualitative researchers is to ensure the quality of their research. Based on the criteria introduced in Chapter 1, I now critically consider my research with reference to Lincoln and Guba's (1985, 1994) and Angen's (2000) proposed criteria for qualitative, 'naturalistic' research.

#### **6.4.1 *Is this Research Morally Justifiable?***

A criticism of some previous research with disabled individuals has been that it either pathologises difficulties, or it is irrelevant to disabled individuals' real concerns (Barnes, 2003; Oliver, 1992). Angen (2000) argues that a researcher's values and beliefs will show themselves in their choices and actions. The basis of my choice to undertake this research was my belief that pupils with SLC difficulties have the potential to learn more effectively; that the labels these pupils have been given does not mean they have pre-determined limitations.

It is possible to criticise my choice to interview these pupils in order to explore their perceptions of learning, intelligence and their abilities, given the nature of their difficulties. However, I consider that these pupils should have the same opportunities as other children, to contribute to research regarding an important aspect of their lives and I attempted to design the research with this in mind. Assuming these pupils have little or nothing to say because of their vulnerability and SLC difficulties label disempowers them, possibly leading them to miss out on activities which may be beneficial (Liamputtong, 2007). I consider that there is no reason for ignoring their voices or treating their views as either invalid or less important than the views of those pupils who were involved in self-theories research in mainstream settings.

This research was a first step in exploring self theories with a special population. This was morally as much as scientifically motivated. An outcome of this research was that I have taken a small step in including pupils with special educational needs within the self-theories research base. Consequently, it can be argued that my research reflects a moral stance that is in accordance with equal opportunities and, therefore, is morally justifiable.

#### **6.4.2 *Is this Research Credible?***

Lincoln and Guba (1985, 1994) stated that credibility in research focuses on the degree to which findings make sense and is constructed through member checks, prolonged engagement in the research setting, persistent observation and triangulation of data.

##### **6.4.2a *Member Checking***

In this research, I summarised my understanding of what each participant said and checked these interpretations with both staff and pupils. Pupils and staff agreed that my understandings matched their own. However, as I have previously stated, in doing so I may have only confirmed what they said and clarified meaning within the context of my own interpretations.

In an attempt to address this, I asked involved staff to read the findings of my research and then to give feedback and comments. I decided, in consultation with staff, that the pupils' reading ability was not advanced enough to read my findings; however, I shared findings verbally with pupils and showed them the mind maps. Pupils were interested in this process but did not provide feedback that altered my findings or conclusions, either because they agreed with me or because they could not, or chose not to, suggest amendments.

Because this research was based within my everyday working practice, I consider that I have insider knowledge of the context and culture within Peachtree School. Because of my relationships with the participants, staff and pupils, I believed that I would recognise anomalous or misinformation within this research. In this regard, my identity as 'researcher' within the research context was well placed to



engage and understand pupils, and I consider that this has supported the validity of my findings.

#### *6.4.2b Triangulation*

Richardson (1994) questioned triangulation as implying the existence of a 'fixed point' (a single truth or reality) and proposed a crystal metaphor with each participant's viewpoint adding an individual facet. This metaphor sits well with my research stance. I consider that I can only come to know reality through my perceptions of it and through attempting to discover and interpret the perceptions of others. Therefore triangulation is not appropriate. Richardson's (1994) crystal metaphor effectively illustrates that each individual's perceptions are equally valid and offer a unique perspective, each facet as significant as any other.

I acknowledge that "what we see depends on the angle of our response" (Richardson, 1994; pg. 523 in Greene and Hogan, 2005; pg. 16) and understand that my findings stem from my 'angle of response', my perceptions and understanding of the participant's words. However, given my research stance, I may only interpret the participants' words. Staff and pupil responses created various viewpoints for me to explore my research questions and all helped me to construct my understanding and present my findings on this basis.

#### **6.4.3 *Can the Findings of this Research be Transferred?***

In this study, I believe I have provided a detailed description of the research setting and the participants and I have explained the understanding I have of pupils and their SLC difficulties. I believe that this research offers a tentative, but encouraging, initial step towards the application of a well-researched theory to a 'special' population. I acknowledge that the findings of this research are based

upon the perceptions of the involved participants, and that these may not be replicable with other pupils with SLC difficulties, or any other SEN. Furthermore, I am not suggesting that all such pupils in other special school contexts have the same views, or indeed that the views of the participants in this study will remain consistent over time. However, I believe that my findings suggest that it may be worthwhile to explore answers to similar research questions in other contexts with other pupils with SEN.

#### **6.4.4 *Is this Research Dependable and Confirmable?***

I have presented and explained each step in my research process, the methods I chose and the reasoning behind decisions I made in detail. I have included examples of transcripts and my coding process in the appendices in order to allow external scrutiny of my findings and conclusions. I have offered a critical analysis of the methodology I have used in this research and acknowledge and accept that the conclusions I have reached stem from these choices and are based on my own subjective understanding.

Given my chosen epistemology, it is more important for my research to be transparent than confirmable. My interpretations may not be identical to other researchers but I have explained my decisions and choices in order to assist others to judge the confirmability and transparency of my research.

#### **6.4.5 *Is my Research Authentic?***

In addition to completing my doctoral study, the aim of this research was to explore the applicability of self-theories with the view of supporting the pupils I work with to develop growth mindsets and become more resilient and effective learners. I consider that my research is relevant to the pupils' everyday lives as

learners, as increased efficacy and confidence in learning situations may help them learn more effectively. I planned my research to include and engage these pupils providing an opportunity for them to contribute their views. Notwithstanding the participation difficulties stated earlier, my conclusions are authentic, as they are based on my interpretation of the data available from pupils and staff.

The following section considers possible implications stemming from my research for the professional practice of Educational Psychologists.

## **6.5 Implications for Professional Practice of EPs**

One of the findings of my research suggests that the participants understanding of intelligence may have been affected by their perceptions of their difficulties. In considering how this may be relevant to professional practice, it is useful to consider how pupils' perceptions of themselves might be influenced by the ways in which EPs interact and construct them through processes such as assessment.

Pupils that are experiencing particular difficulties are often those referred for EP involvement. The messages that pupils may take away from their encounter with an EP may impact upon how they view their ability and learning. Being referred to an EP may be viewed as evidence that difficulties exist. This may have lasting consequences. As Andy said:

*"My last school was... emm... a lady told me. "Something not quite right" in there." (taps forehead again) (A1:34)*

Andy's memory of an encounter with a professional is relevant and may have led to his view of having a permanent impairment. This suggests that EPs should adopt a reflexive stance as they engage in assessment of pupils. Where difficulties exist, these issues are not overcome simply by the application of a

label. Riddick (2000) argues that the important question is whether that label enhances or detracts from the way the individual perceives themselves and how they are perceived by others.

The findings of this research suggest that pupils may develop fixed beliefs about their intelligence and personal potential, based on their understanding of the words that they know have been used to describe them and their difficulties. For pupils to avoid developing self-beliefs that limit their engagement in learning opportunities, and therefore limit their progress, EPs need to be aware of the power of the words they use to describe pupils, and think about their impact, not only with the pupils themselves, but also with parents and other professionals. If it is accepted that progress is possible for all, then helping pupils understand the nature of learning and intelligence may enable them to avoid developing a fixed mindset which is based on ideas of impairment. Finally, by focussing upon the pupil's belief about the nature of intelligence rather than upon the perceived critical importance of their innate ability (or inability), it may be possible to improve self-competence beliefs and improve learning behaviours. Most importantly, this may empower the child and help them develop positive self-beliefs.

My findings suggest that meaningful engagement with pupils with SLC difficulties is more challenging and can depend upon the experience, rapport and the time available to the EP. In my experience, it is possible for professionals to make the assumption that the reason a pupil does not engage in conversation is because of their level of difficulty, their disability or impairment. This can lead to the views of the pupil being disregarded in favour of the views of parents, teachers and other adults.

The possibility that self-theories research may be applicable to 'special' school pupil populations has implications for EPs which reinforces the need for caution in the process of assessment and in consultations with pupils, staff and parents. EPs may have an opportunity to directly support 'growth' self-theories and could develop their practice with this in mind; for example, by sharing this knowledge base with involved adults.

## **6.6 Next Steps**

The findings of this study have led to changes at Peachtree School. Pupil participants were asked which aspects of the intervention they believed were the most helpful, useful or enjoyable, in order to develop the intervention for other pupils in school. The pupil participants highlighted the 'Brain Buzz' sessions and the daily 'Learning Logs' as the most fun and, in their opinions the most useful in terms of how they understood and focused on learning. This was also the view of other pupils, not included as participants in the research but who were also included in aspects of the intervention. The feedback from these pupils suggested that these sessions and reflections influenced their understanding of learning and intelligence.

As a result, the 'Brain Buzz' sessions now forms part of Personal, Social, Health and Citizenship Education lessons (P.S.H.C.E.) for pupils in Years 10 and 12. Plans are currently underway to turn this programme into an ASDAN unit award. All pupils in Key Stages 4 and Post 16 now take part in 'Learning Reflections' at the end of every day where they recap and reflect on their learning that day, and consider where it may lead them next. Consequently, this initial research project,

pioneered by a small group of pupils, could be viewed as having a positive impact upon the wider school community at Peachtree School.

The only pupils excluded from these developments are pupils believed to have severe or profound cognitive impairments. These are pupils working at P4 or below (P4 is on the P scale P1 – P8 which exists below National Curriculum level 1). The reason for this is that staff believed that these pupils are incapable of understanding or accessing the 'Brain Buzz' sessions, and are thought to be unable to reflect on their daily learning.

It can be argued that there is a need to develop research in this area and particularly to further explore the methods which might be used with 'special' populations. Exploring potential limitations and ways of overcoming these will allow the research in this area to reflect the diversity of the population.

I suggest that limits may exist not because of cognition (whether intelligence is fixed or malleable), but because of language. The vocabulary and semantics used within the 'Brain Buzz' sessions or the wider research base did not appear to allow access for all. This appears to be an impasse, as to access the ideas behind this research, using the language of the research base is necessary. Where language restricts access, exploring what else might be done to include and support as many learners as possible appears to be important.

A possible way forward could be formulating research questions that reduce the need to ask direct questions and minimise the use of language. This may involve making use of a 'slow-drip' repetitive method of seeking responses, using language that the pupils meet often, so they have an opportunity to better

understand and 'warm up' to the language used, and have time to formulate their responses.

For example, if a teacher adopts specific set phrases (which could also be on view within the classroom, either in written or pictorial form) and referred to each of them at least once each lesson, both to individuals and the whole class, then the pupils would become used to the language and would possibly be more likely to be able to respond in a meaningful way. Phrases could include:

'It doesn't matter if you get something wrong if you **learn** from it'

'Your job today is to **learn** how to ...'

'If you try harder, you will **learn** better'

'When you **learn** something, your brain works better'

A possible enquiry could be based around discovering what effect, if any, the use of phrases like this might have on pupil's learning, self-beliefs and learning behaviours over time.

Another way forward might be to use some form of a 'Brain Buzz' process, but only consider whether it brings about any changes in the learning behaviour of the children. Here findings could be captured via observation. A weakness of this approach involves the researcher being reliant upon their own understanding and perceptions of what they observe; however, if the research question is phrased in such a way that the findings relate to changes in pupils' behaviour then it is not asking the researcher to prescribe meaning to their words. A further weakness relates to the position of children within the research as it is carried out 'on' them rather than 'with' them. For this reason I would not have chosen to approach my research in this way but this offers a possible alternative approach.

## **6.7 Conclusion**

This research stemmed from a conversation with Carol Dweck which provoked a question of how applicable self-theories research may be to pupils with SEN, specifically pupils with SLC difficulties. Findings suggest that this research may have some application beyond the mainstream schools and colleges covered in the research of Dweck and colleagues.

In addition to the participants and type of school involved, a key difference of my research is the methods I chose to explore the research questions. As I adopted a critical realist stance, I did not rely on quantitative methods. I chose instead to engage and talk with pupils and involved staff in semi-structured interviews in an attempt to understand their perceptions before and after an intervention based on self-theories research.

The pupils' SLC difficulties meant that engaging them in the interviews was not straightforward. The pupils were involved in the approach and I took their contributions seriously. I have also attempted to draw attention to possible issues related to the choice of methods, which may have impacted upon the findings. In so doing, I appreciate that exploring my main research question was demanding and that other ways of doing it would be possible. Finally, I accept that my findings present only one possible interpretation of pupil and staff responses.

Overall, I consider that researching with children is not easy and researching with 'special' children brings its own additional challenges. However, I believe that all children should have the opportunity to be included in research where findings are likely to have an effect on their learning or, indeed, on their lives. Too often, in the past, assumptions have been made where the views of those involved have



been missing. One way to redress this would be to involve these children in the research process and investigate together how to do this effectively.

This research has been a long, and at times difficult, experience. I have developed, both as an EP and personally, as a result of my studies. The experiences and numerous conversations that I have had with 'special' individuals throughout this process have been a privilege. In a final short section, I offer some personal reflections which explore my development through the process of completing this research and provide additional personal information concerning issues of reflexivity.

## **PERSONAL REFLECTIONS**

'The Liberation' was used as a metaphor throughout my thesis to illustrate the process of exploring self-theories as a possible way to alter pupils' beliefs of intelligence and learning and, as a result, unlock their potential. As I undertook the process of planning, carrying out and writing up my research, I began to appreciate that this metaphor is also appropriate for my own learning journey. I now realise that I began this process as fixed by my own assumptions of myself, intelligence and my abilities as any of the pupils in this study.

Before I began this research, I did not appreciate that I had developed a fixed mindset. Throughout the process of completing previous assignments, I regularly said "This is too hard for me" or "I'm just not clever enough to do this". The possibility of failure felt ever present; if I was not 'good enough' or 'clever enough' to successfully complete assignments, it was only a matter of time before 'others' found this out and how could I possibly become cleverer? I felt exposed, as if the limits of my intellectual capacity were on show for others to judge. These anxieties made the process very uncomfortable and at times extremely stressful. If my work wasn't good enough, then I wasn't good enough; everyone would know and there would be nothing I could do about it. I felt uncomfortable in my new role as student, needing to seek reassurance and frequently feeling both lost and insecure. To make use of Tom's phrase, I felt "a bit helpless, hopeless and hapless".

The parallels between my experience completing this doctorate, and how the pupils in this study experience learning in school now strike me as obvious. Feeling exposed, vulnerable and insecure does not make learning easier. I

needed to work hard to change my mindset; intelligence alone is not necessarily enough to succeed nor does academic struggle signal failure. Through my growing acceptance that hard work, resilience and determination are fundamental to success at any level, I managed to finally complete this work.

This was a life changing process. An experience that I shared in part with a group of young people that I now understand that I have more in common with than I would have considered possible before I started. Pupils' labels are generally used as a shortcut to assist others to understand their needs, difficulties and difference. However, our shared human experience leads me to conclude that we all have needs that are special; we all experience difficulties and we are all more similar to one another than we are different.

I consider the development of a malleable mindset to be vital when encouraging anyone to make the most of themselves and their abilities. Whatever the innate 'raw materials', developing this mindset offers any individual the opportunity to make the most of themselves, their abilities and to learn and succeed.



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## **APPENDIX 1**

### **Pupil Pen Portraits**

## **PEN PORTRAIT – Carl (aged 15)**

### **Difficulties**

- Learning difficulties
- Speech and language difficulties
- Behavioural issues
- Physical development (Scoliosis and growth issues)

### **Therapy input**

- 2 x SALT sessions
- 2 x Physiotherapy sessions
- 1 x OT sessions

### **Health**

- Wears glasses
- Carl has Prader Willi Syndrome and needs support to maintain a healthy balanced diet.
- Carl is currently undergoing injections of growth hormone.

### **Concerns**

- Social interaction
- Passive nature
- Egocentricity

Carl is a friendly boy who has developed and maintained some friendships within school. He prefers to watch or be in the background rather than joining in he must be encouraged to participate. He often needs prompts to keep on tasks and contribute during work sessions; he rarely offers ideas and responds well to direct questioning.

Carl has a number of distraction methods he employed (e.g. rolling his clothes up) and must be encouraged self monitoring of these. He has now been given a fidget object to help with his concentration.

### **ICT**

Carl uses various programmes and is very competent on the computer often working independently on ICT tasks.

## **PEN PORTRAIT – Andy (aged 15)**

Andy is a pleasant, friendly boy who wants to interact with others his age but lacks the necessary social and communication skills to do so. He has been diagnosed with Aspergers syndrome; in addition to this he has a broad spectrum of difficulties including significant social communication and literacy difficulties.

Andy can access learning with high levels of support and requires clear boundaries to be set. He can become distracted in his own thoughts and ideas and benefits from regular and specific prompting to engage listening activities. He has great difficulty sitting still for long periods of time and will move about his chair, put his feet on other chairs or appear to lounge at his desk. He can appear not be listening, but when questioned he can demonstrate that he has been listening. It is important that he is regularly prompted to sit appropriately and attend in class. When motivated, and when the topic of conversation coincides with an interest of his own he can find it difficult not to shout out answers, and requires reminders to put his hand up.

He is very interested in History and can often be 'brought around' by talking about the past, especially the Second World War. He has an excellent memory for historical facts and enjoys sharing it with the rest of the class. He can't always understand why his peers don't share his enthusiasm about these subjects.

Andy's short term memory and visual memory are very weak and he requires regular reminders of the names of the staff and his peers in class. He can be very intolerant of others, especially those who are different to himself. He may make negative or mean comments to these students but when confronted by staff he will often be very apologetic, understanding that he has said something inappropriate.

## **PEN PORTRAIT – Martin (aged 16)**

Year 11 pupil

Time attending this school: 8 years

Specific Difficulties/Diagnosis:

- Cerebral Palsy – all 4 limbs affected, legs more than arms.
- Asthmatic – inhaler on request.
- Dyslexia??

Moving and Handling:

Mobilises around the school for short distances only using a posterior Kaye Walker. He wears callipers on both legs locked in extension when standing in a standing box in class. He needs assistance to fit the callipers which are applied in a flexed position when he is sitting in his wheelchair. The standing box needs to be steadied so he can pull to standing with extended legs. He is able to transfer seating independently but needs supervision when moving up and down to the floor. Able to self-propel in his manual chair but uses a power wheelchair for outdoor use.

Communication:

Martin is verbal and sociable. He needs encouragement to interact with peers as well as adults and to broaden his range of conversational topics.

Eating and Drinking:

Independent and is encouraged to make healthy and varied choices so as not to have too many sandwiches.

Additional information:

Martin wears glasses and benefits from using green overlays while reading and green paper for his written work. He needs assistance with personal care.

## **PEN PORTRAIT – Matthew (aged 15)**

### Difficulties:

- Speech production
- Verbal memory
- Confidence
- Self-esteem

Matthew is friendly and sociable boy with a very caring attitude towards others. He has developed and maintained friendships within the class, the school and out of school activities. He often shows interest and concern in others', which reflects how others see and respond to him. Consequently, he is a popular member of his class and social group. He enjoys taking part in outdoor play activities, and will take an active role in many organised sports, particularly football. Matthew has a lovely sense of humour. He is growing more confident to use his humour with both his peers and adults, and is able to direct his humour appropriately.

Matthew works hard to achieve his targets and generally likes to please and help others in his environment. He always responds well to praise and is motivated by the class reward system, showing pride in his achievements. He can show good motivation in his work and is often happy and well-focused within the classroom. He is beginning to work more independently within classroom tasks, and knows when to seek adult assistance.

In group situations, his confidence is growing. It is very encouraging to see him developing successful strategies to help in his expressive language. This has enabled Matthew to become less self-conscious and more willing to contribute his thoughts and ideas with the rest of the class. It has also resulted in him approaching such situations more calmly and therefore he is now less likely to become anxious when difficulty arises. This has also had a direct positive impact upon his confidence and self-esteem, although this still needs further development. Matthew enjoys using the computer and it can act as a good motivator. He uses a variety of programmes independently. He can use programmable items like 'Bee Bots' with minimal support.

## **PEN PORTRAIT – John (aged 15)**

John started Percy Hedley School in September 2007. He has significant expressive and receptive language difficulties and a diagnosis of autism which impact on all aspects of his learning.

John is a very polite, well-mannered young man and appears very compliant in school. He is developing a greater awareness of appropriate greetings in class and around school, however he still benefits from reminders not to greet the people more than once. John's compliance can often be misinterpreted as 'understanding' and it is important that all direction/ instruction given to John is reinforced to ensure he has fully understood what is being asked of him. He will often answer "Yes...." Without really understanding what has been asked of him. John has, in the past been taught 1-1 and so often relies on an adult sitting with him and repeating basic instructions. He is currently being encouraged to think for himself to develop his attention and listening skills in class.

He is able to talk confidently of matters of interest, such as Coronation Street or other TV programmes, and can become quite obsessive about watching his programmes at home. Regular contact is maintained with home as John can be very manipulative with his parents. His parents report that he will often repeat directions, or questions to cause difficulties at home. John likes to keep home and school very separate and is now more aware of the communication between the two.

John can become very obsessive with things, such as Coronation Street, or even other children in his class. He requires clear lines, including the use of social stories, to be drawn for him to illustrate acceptable and unacceptable behaviour around his peers.

## **APPENDIX 2**

### **Hand-outs from Staff Training ~ Mindset**

## Mindset



Carol Dweck



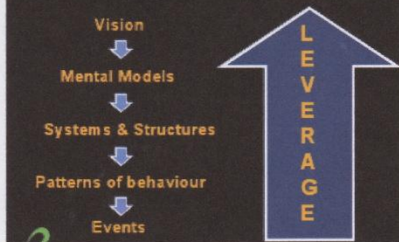
A born genius?

## How beliefs influence motivation and achievement

Take 5 minutes to complete Activity 1.



## LEVELS OF PERSPECTIVE (Daniel Kim)



## Mindset

Dweck's research indicates that people tend to develop one of two different concepts of ability:

- An **entity** view
- Or
- An **incremental** view



### Mindset

Each relate to an individual's beliefs about abilities/talents/intelligence

These beliefs create a whole mental world to live in:

**FIXED** mindset - ability cannot change

**GROWTH** mindset - ability can change  
(Dweck, 1999)

### Entity or fixed intelligence view:

- Intelligence/ability is a fixed or stable trait, and unevenly distributed among individuals
- 'You either have it or you don't' and "it" can be accurately judged by others *and* "it" can't be improved or increased much no matter what you do.

### Intelligence is fixed implications:

The goal:

to perform well and look clever, even if that means sacrificing learning...

...as any mistakes means that I am not clever enough to succeed and there's only a fixed amount of intelligence.

### Intelligence is fixed implications:

- If confident in my abilities, I'll seek opportunities to demonstrate them (although I won't always risk very much).
- If I'm not confident in my abilities, I'll avoid situations with potential negative feedback → thus tending to avoid challenges and minimize intellectual risks.

### Intelligence is fixed implications:

- So the less confident will choose either very easy or very difficult tasks so that failure is not necessarily attributable to low ability – "I'm stupid and there's nothing I can do about it."
- In addition, high effort or the need to study often thought of as reflective of low intelligence – "Clever people don't need to try hard."

### Intelligence is fixed implications:

- Strategy after experiencing difficulty → less effort, act bored, procrastinate
- "If I hardly study and still do well, then I'm really clever!"
- "If I don't do well, well I didn't really try so it doesn't mean anything."  
(AKA: Self-handicapping)

#### Intelligence is fixed implications:

Any failure often results in:

- "Why bother? I'm just not clever enough to do any better."
- "Only a few peoples can get the top marks"
- "I just can't get this."
- Blame — poor teacher, unfair or limiting conditions, illness, tiredness...

#### Intelligence is fixed implications:

- When work becomes difficult, effort is withdrawn to preserve sense of ability (high effort leading to failure means I'm stupid, which I can't change.)
- Actual achievement is sacrificed in order to hold onto the belief that I **could** do well.

#### Intelligence can change - Incremental view

Belief is that intelligence/ability consists of an ever expanding repertoire of skills and knowledge that can be increased through **effort and determination**.

#### Intelligence can change implications:

The goal:

- not to look smart but to **be** smart by increasing my knowledge, skills and understanding.
- Ability is more task specific and is developed through study and practice — effort is all important.

#### Intelligence can change more implications:

- Failure usually encourages more practice and study, increasing chances of future success.
- Failure → work harder, don't give up!
- Seek out challenges, moderately hard (not too easy but not overwhelmingly difficult.)
- "Making mistakes is part of learning."
- "The harder you work at something, the better you will be at it."
- Strategy after difficulty → more effort, look for strategies that may help, get some support...

#### Measuring mindset

(Dweck, Chiu & Hong, 1995)

"You have a certain amount of intelligence, and you can't really do much to change it."

"You can learn new things, but you can't really change how intelligent you are."



### Motivational framework: goals

(e.g. Dweck & Elliot, 1983; Dweck 1986, 1990, 1991)

- Learning goals – **OR** – performance
- Mastery and competence – **OR** – demonstrating intellect
- Grades and marks only reflect how people are doing now – **OR** – grades predict the future
- Increased performance and enjoyment – **OR** – avoidance of challenges



### Mindset, brain and feedback

(Mangels et al. 2006)

Each time participants got a wrong answer they were given the correct answer

They got an unexpected retest afterwards



- People oriented differently towards negative feedback
- Fixed mindset showed less attention to the formative information and more to how they felt
- Those with a growth mindset did significantly better on the re-test

### Response to setbacks and failures

(e.g. Dwyer & Dweck, 1978, 1980)

- Resilient or helpless?
- Pay attention to learning or performance?
- Focus on what they are learning or how they appear to others?
- Attempt new ways to do things or stick to known routines?
- Use self-motivating statements such as 'I can' or 'That's easy!'
- When faced with difficult tasks they will factor in other reasons for failure or look for ways to succeed?



### Growth mindset

More open to learning  
More willing to confront challenges,  
More able to stick at difficult tasks  
More able to bounce back from failure

(Dweck, 1999)

### Fixed Mindset

Gives no way out to recover from failures:

- Giving up, retreating to comfort zone
- Blaming others
- Trying to feel superior
- 'Self-handicapping'

### Where do Mindsets come from?

The language we use tells pupils what we believe and what we value...

### Feedback

(Mueller & Dweck, 1998)

	Praised for <b>effort</b>	Praised for <b>ability</b>
goals	90% of the group created learning goals	66% of the group created performance goals
enjoyment	continued	decreased
persistence	continued	decreased
performance	improved	declined
lied about scores	one individual	40%

### Messages about what is valued:

#### • Intelligence Praise:

"Wow, that's a really good score. You must be really clever."

#### • Effort Praise:

"Wow, that's a really good score. You must have tried really hard."

### Research:

3 Non-verbal tests – easy, hard, easy.  
3 groups: Intelligence praise, Effort praise and a control group.

Results...

In addition, pupils were asked to tell a peer their score...

### What to praise

- Effort, struggle, persistence in the face of setbacks
- Strategies, making choices, trying ideas
- Choosing difficult tasks
- Learning and improvement

### Effort effect

(e.g. Legget & Dweck, 1986; Mueller & Dweck, 1997)

Reflection of low intelligence

– OR –

Necessary part of success?

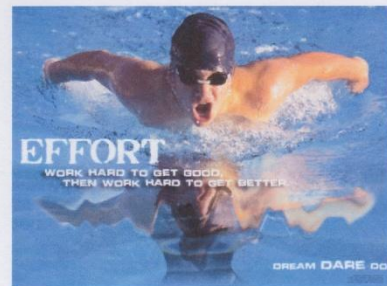
Hard work means 'I don't get it'

– OR –

Hard work means 'I need to try harder'

Effort = lack of ability ?

Effort = success ?





## Can mindset change?

(Bergin, 1992)

### Yes!

Research has shown that people who read this article changed their mindset and their persistence (effort) in the face of setbacks.

### You Can Grow Your Intelligence

New Research Shows the Brain Can Be Developed Like a Muscle

Many people think of the brain as a muscle. They don't know about about intelligence and how it works. When they do think about it, they think of it as being pretty fixed and a little bit like other organs, like the heart and lungs that only grow in size.

But new research shows that the brain is more like a muscle. It can grow and get stronger when you use it. And scientists have found that you can have the brain grow and get stronger when you have it.

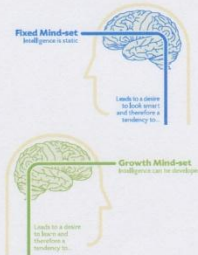
Brain research shows that the brain is more like a muscle. It can grow and get stronger when you use it. And scientists have found that you can have the brain grow and get stronger when you have it.



## Other ways to change mindset

### Feedback

Tutor, teacher, parent beliefs about ability



## Pygmalion effect

(Rosenthal & Jacobson, 1968)

Teacher expectancy effect:

- Teachers were told that tests indicated that some children would bloom over the coming school year (pupils were randomly assigned)
- The bloomers group made greater gains in achievement over the year
- Similar findings have emerged in other areas; university, business, military, banking (e.g. Eden, 1990)

## Born clever?

Mindset has a significant impact on motivation and performance

### But

Beliefs can be changed...



## **APPENDIX 3**

### **‘Brain Buzz’ Sessions Overview and Resources**

<p><b>Session 1:</b></p> <p><b>INTRODUCTION</b></p>	<p><b>Introduction to Brain Buzz sessions:</b></p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Understand the purpose of the sessions;</li> <li>• Gain experience of the curriculum and its purpose;</li> <li>• Meet and begin to understand key vocabulary, such as:</li> </ul> <p><i>brain, function, structure, attention, concentration, intelligence, learning, neural, mindset, growth, fixed.</i></p>
<p><b>Session 2:</b></p> <p><b>BRAIN BASICS</b></p>	<p><b>Brain Basics:</b></p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Gain experience of the basics of brain structure and function.</li> <li>• Understand how to be ready to learn and how to maintain readiness</li> <li>• Understand how to support good attention and concentration</li> <li>• Gain knowledge of the physical aspect of thinking and learning, which underlie a growth mindset.</li> <li>• Recap and practice key vocabulary, such as:</li> </ul> <p><i>brain, function, structure, attention, concentration, intelligence, learning, neural, mindset, growth, fixed.</i></p>
<p><b>Session 3:</b></p> <p><b>BRAIN BEHAVIOUR</b></p>	<p><b>Brain Behaviour:</b></p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Learn that the brain functions by sending chemical messages through a network of nerve cells.</li> <li>• Learn that these cells are responsible for thought.</li> <li>• Develop understanding that this is how learning changes the brain.</li> <li>• Learn how emotions can influence the brain.</li> <li>• Rehearse strategies for managing their negative emotions and enhancing their positive ones (link to SaLT social communication sessions).</li> <li>• Recap and practice key vocabulary, such as:</li> </ul> <p><i>brain, function, structure, attention, concentration, intelligence, learning, neural, mindset, growth, fixed, emotions, network, cell.</i></p>

<p><b>Session 4:</b></p> <p><b>BRAIN BUILDING</b></p>	<p><b>Brain Building:</b></p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Discover how learning changes the brain through the growth of connections in neural networks with repeated use,</li> <li>• Understand that this knowledge is key to the growth mindset.</li> <li>• Learn that intelligence can be developed through thought and learning.</li> <li>• Recap and practice key vocabulary, such as: <i>brain, function, structure, attention, concentration, intelligence, learning, neural, mindset, growth, fixed, emotions, network, cell, thought, connections.</i></li> </ul>
<p><b>Session 5:</b></p> <p><b>BRAIN BOOSTERS</b></p>	<p><b>Brain Boosters:</b></p> <p>Pupils will:</p> <ul style="list-style-type: none"> <li>• Understand the concept of the malleable brain to understand the processes of memory.</li> <li>• Meet and practice study strategies linked to the way their brain works.</li> <li>• Practice study skills to deepen and reinforce their understanding of the growth mindset.</li> <li>• Recap and practice key vocabulary, such as: <i>brain, function, structure, attention, concentration, intelligence, learning, neural, mindset, growth, fixed, malleable, memory, network, cell, connections.</i></li> </ul>
<p><b>Session 6:</b></p> <p><b>REVIEW</b></p>	<p><b>Review:</b></p> <p>This session recaps the previous five sessions and the key concepts of the 'Brain Buzz' and introduces study strategies:</p> <ul style="list-style-type: none"> <li>• Attention &amp; Concentration,</li> <li>• Organization, Learning &amp; Memory,</li> <li>• Emotion &amp; Motivation.</li> </ul> <p>This will be individualised, supported by SaLT, OT and support assistants to provide individual or small group learning opportunities.</p> <ul style="list-style-type: none"> <li>• Recap and practice key vocabulary, such as: <i>brain, function, structure, attention, concentration, intelligence, learning, neural, mindset, growth, fixed, malleable, memory, network, cell, connections, attention, organisation, motivation.</i></li> </ul>



## **What does your brain need?**

### **Energy**

Your brain needs energy.

Your brain uses about 30% of the fuel your body gets from food. Eggs, nuts and fish are some foods that help give your brain the energy it needs.

### **Sleep**

Your brain needs sleep.

Your brain needs to spend about one-third of the day sleeping to re-charge (about 8 hours every day).

If you don't get enough sleep, you may have problems concentrating at school and difficulty remembering and learning things.

### **Exercise**

Your brain needs exercise.

Your brain works better when you get regular exercise. When you exercise your brain learns more easily and grows new cells.

## **What does your brain do?**

Your brain is your body's control centre – like a powerful computer, it takes in and processes information.

Your brain is always switched on, even when you are asleep.

Your brain can process many different things:

**Involuntary functions** (things you do without needing to think about it)  
E.g. Breathing, heart-beat, blood pressure, dreaming.

**Voluntary functions** (things you choose to do and you need to think about) E.g. Moving, looking, listening, speaking, writing.

### **Sensation and Perception**

Your brain takes in information from your five senses – eyes (sight), ears (hearing), nose (smelling), mouth (taste) and skin (touch).

### **Emotions**

Your brain also processes how you feel – happy, sad, angry, excited etc.

### **Learning**

Your brain processes information and helps you learn new facts and skills. Your brain stores important information in your memory.

### **Planning and Making Decisions**

Your brain also makes plans for the future and makes decisions based on the information.

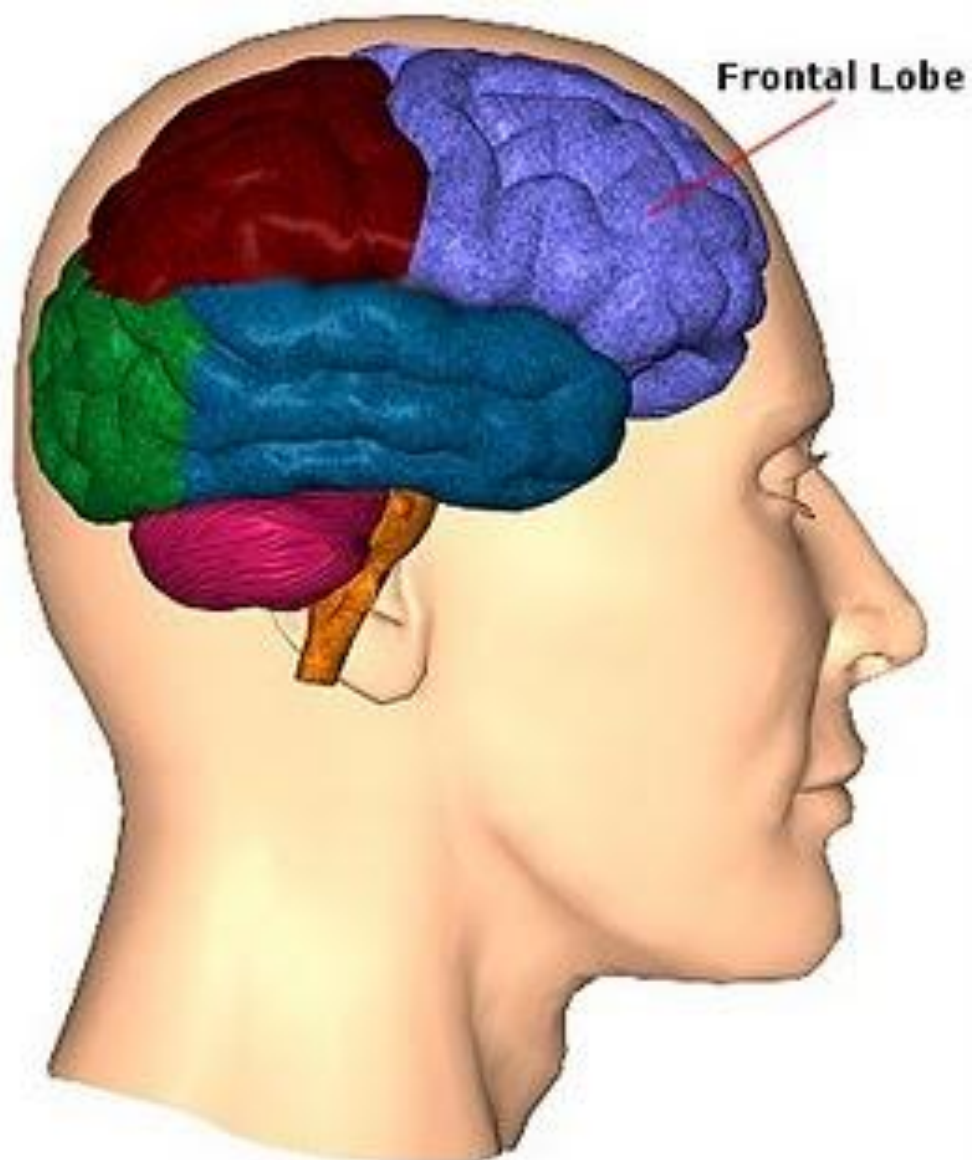
## How is your brain made?

Your brain has three parts:

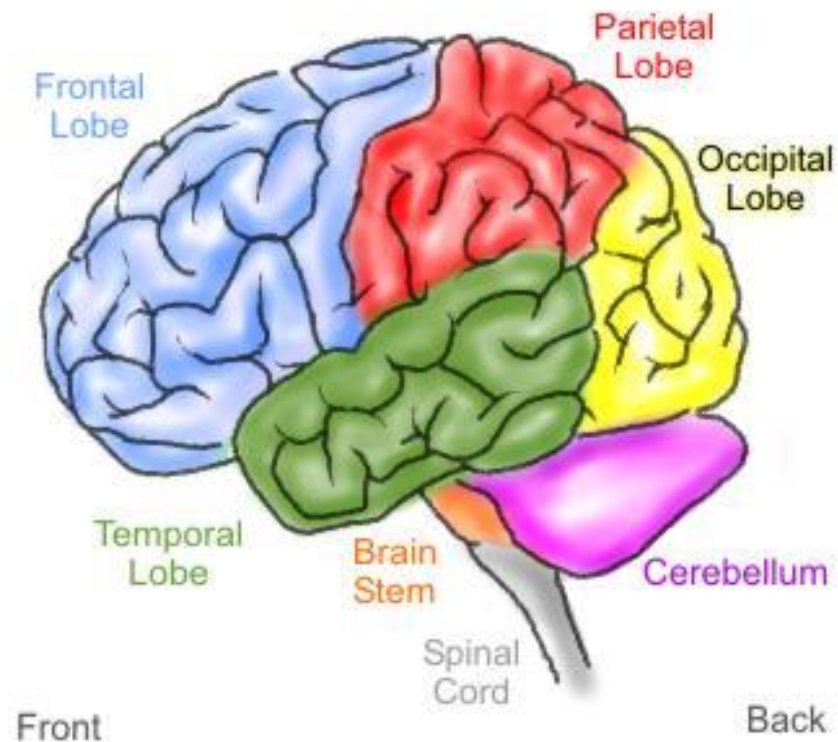
**Brainstem** – this controls basic functions like breathing and heartbeat. The brainstem is the part of your brain that keeps you alive.

**Mindbrain** – this controls your temperature and your sleep patterns.

**Forebrain** – this controls most of your behaviour. It is the biggest part of your brain and has four parts called lobes.



## Regions of the Human Brain



The Parietal lobe receives information from your skin and processes touch, pain and temperature.

The Occipital lobe receives information from your eyes and processes what you can see.

The Temporal lobe receives information from your ears and processes sounds and language.

The Frontal lobe receives information from other areas of the brain and puts it together. It is the thinking zone in charge of your behaviour and actions.

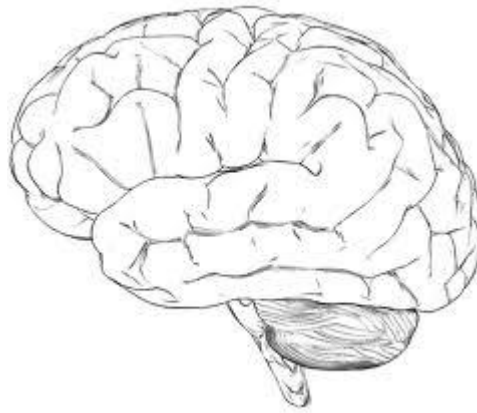
### **How can you help keep your brain working well?**

- Eat the right foods.
- Get enough sleep
- Eat healthy foods like fish, eggs and nuts

Focus on one thing at a time – if you pay attention to one activity at a time you increase your brain's learning power. This is because you are using more of your brain for learning.

## What is your brain made of?

The surface of your brain looks crumpled up:



This means that the brain's surface is a lot bigger than if it were smooth. This means more brain cells can fit inside your head.

The brain is made up of billions of nerve cells called **neurons**. Neurons are connected together like a network.



Neurons are a special shape with different parts that allow them to connect to other neurons. Neurons send messages to each other.

## **Emotions**

Your emotions affect thinking and learning. Your brain is made to deal with all sorts of situations and it sends out different chemicals into your body. These chemicals affect your body, your emotions and your thinking.

Negative emotions like anger or fear stop you from thinking clearly. Negative thoughts get in the way of learning.

Positive emotions such as happiness or feeling calm help you think more clearly. When you think positive thoughts, you can learn more easily, your memory works better and you can pay attention and focus on your work.

### **Knowing this can help you learn.**

When you are afraid or feel negative in class your brain sends out chemicals that make it harder to concentrate and learn.

You can help yourself by thinking positive thoughts.

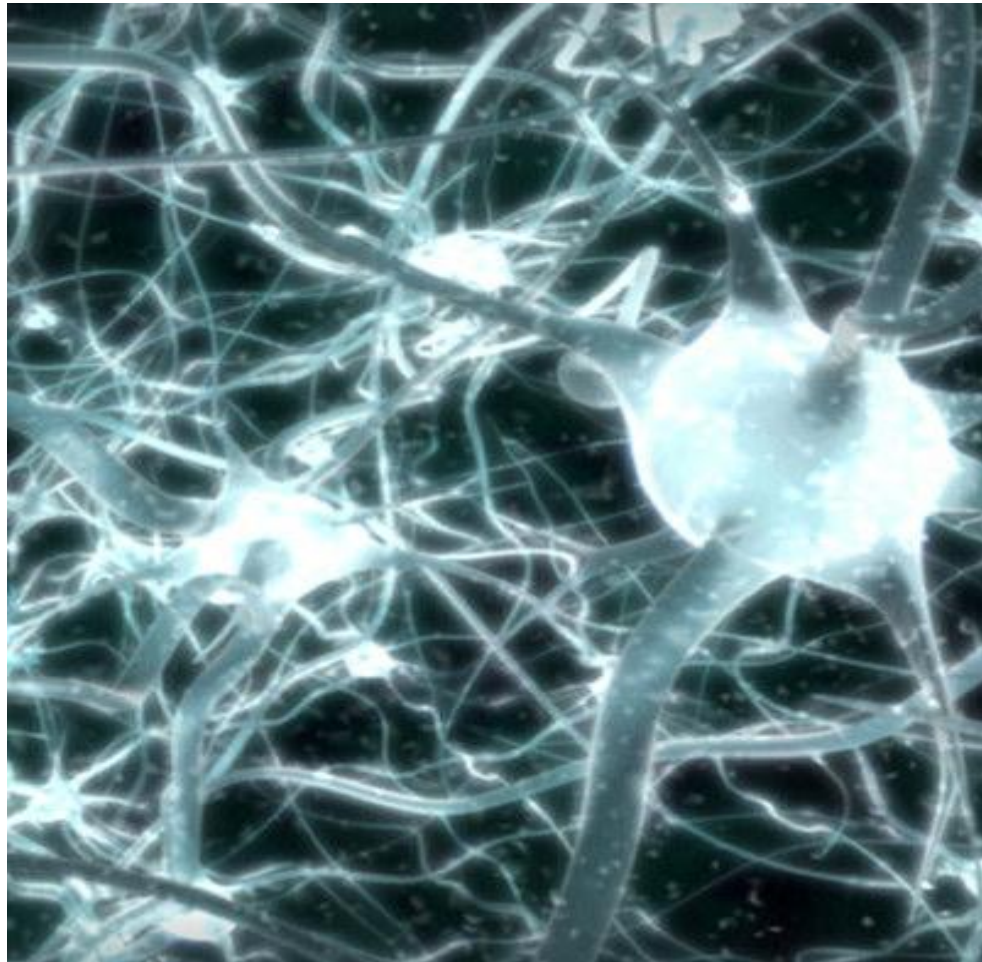
You can use self-talk to refocus your thinking:

- Instead of saying “I can’t do it” tell yourself “I can try hard to do it”
- Instead of saying “I’ll probably fail” tell yourself “Even if I don’t succeed I’ll learn a lot by trying my best.”

How does your brain learn?

What is learning?

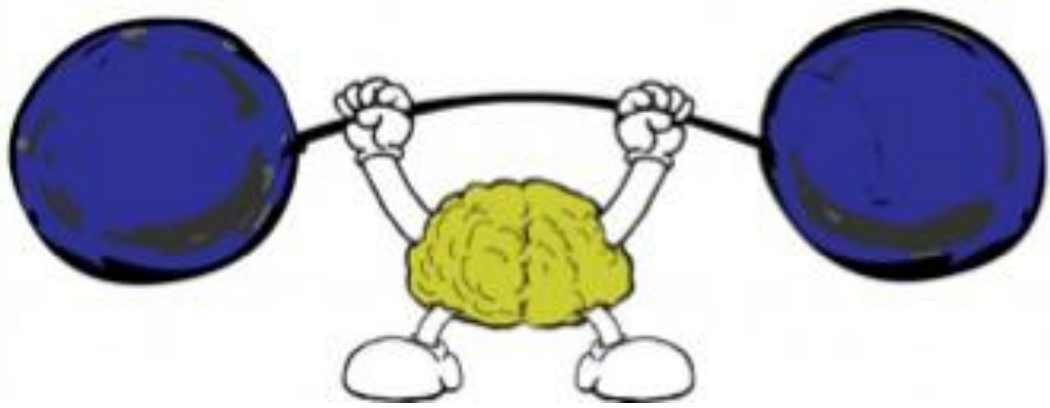
Whenever you think, the nerve cells in your brain send messages through a network of connections.



When you learn something, neurons grow and make new connections. The more you learn, the more connections you make and the bigger the network in your brain becomes. The bigger your network becomes, the easier it is for you to think and learn.

Learning makes your brain grow. Whenever you practice something or learn new information, you are growing your brain and becoming cleverer.





When you understand how your brain works then it helps you to learn better.

When you learn new things, you build your brain making it bigger and stronger. The more you learn, the cleverer you become.

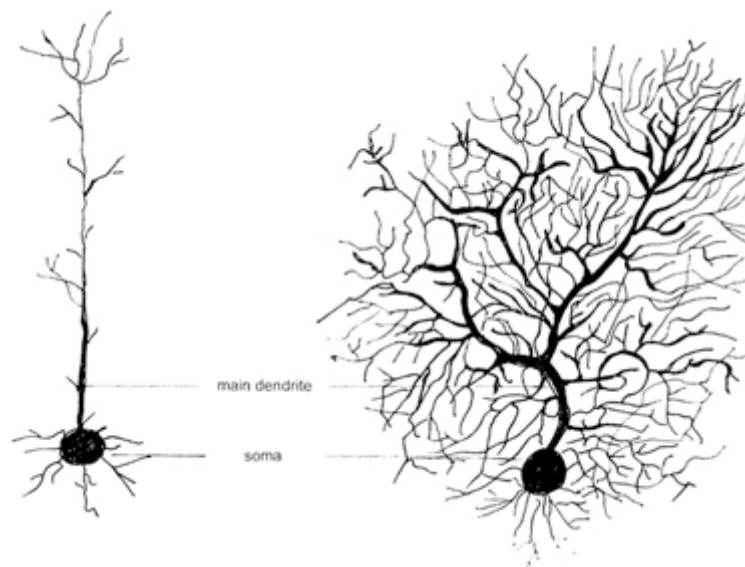
It's just like building muscles when you exercise. The more effort you put in, the more you build your brain and the cleverer you will become.

## What makes you clever?

Intelligence is the ability to think and learn. It depends on the network of neurons in your brain.

Intelligence can include many different skills like using language, solving puzzles and understanding other people.

When you learn new things, you make new connections in your brain. The more connections you make, the cleverer you become. So anyone can get cleverer by putting effort into learning.



When you learn something new your brain grows bigger and stronger like a muscle. So the more you learn, the cleverer you become.

When you don't feel like you know very much about something, it can make you feel stupid. You might feel like giving up. BUT remember you only don't know it **yet** – this is only because you haven't built up that network of connections yet. With effort and hard work you can grow the connections you need and learn anything.

If you try hard to learn, practice and work hard your brain will get stronger just like your muscles do when you exercise.

## What can you do to learn better?

### Get active:

- Focus on your work. Take charge of your learning, explore and seek out new information. If you need help, ask for help. If you make a mistake, learn from it; you now know what **not** to do.

### Use repetition

- Just like when you exercise, repeating information or practicing a skill will make the connections in your brain stronger. Make sure you understand and remember things by repeating or practicing.

### Effort

- When something is hard, you need to try hard. You need to put effort in to build your brain power. Remember – Don't give up!

Some people believe that people are born clever or stupid and that they'll always stay that way. But this isn't true – the more you learn, the cleverer you become. Anyone can get better at anything – all it takes is effort and practice.

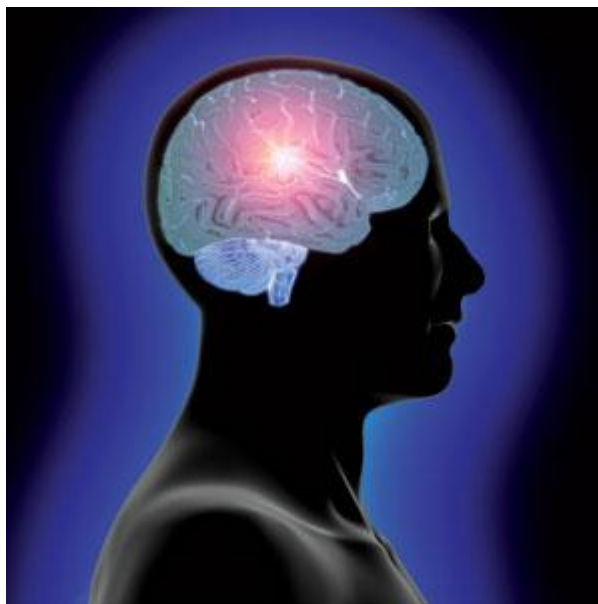
## **What is memory?**

Memory is the basis of learning. Your memory stores the connections your brain makes every time you learn something new or have a new experience. When you try to remember something, your brain cells send messages over the connections you made. This is how you can remember information.



You can learn new things more easily and remember things better if you follow these **BRAIN** rules:

<b>B</b>	<b>B</b> reak down information into smaller parts.
<b>R</b>	<b>R</b> epeat and review information to help you remember.
<b>A</b>	<b>A</b> ctive learning. Take an active part in lessons. Focus your full attention your work.
<b>I</b>	<b>I</b> nformation search. If you don't know something, ask or look it up.
<b>N</b>	<b>N</b> ever give up. If something is difficult, it means you need to try harder and keep trying.



## **APPENDIX 4**

### **‘Learning Log’ examples**

**Today I learned...** 23/3

that an extinct volcano is  
dead but a dormant one is  
just asleep.

**Today I learned...** 24/3

I learned how to double number up  
to 20.



**Today I learned...**

Today I learned How to Write a  
letter in ICT

In science - I learnt to understand plastic  
in p.e I learnt how to ~~the~~ slow the ball  
in table tennis

**Today I learned...**

- Maths How to do ratio in science  
English - learned How to Write in long sentences  
PSHE - how to talk on the phone  
and my brain need Exercise vegetables  
and 9 hours sleep.



## **APPENDIX 5**

### **Video Transcript ~ an example**

	<u><b>Lesson 3</b></u>		<u><b>Video of Lesson 3</b></u>
	<p>Start of Maths lesson in classroom. Tom (Staff), Emma (Staff), Carl, John, Andy, Matthew and Martin taking part.</p> <p>Tom stands at the front of the classroom in front of the pupils all sitting together in the front row</p>		<p>Sue Fisher, Carl, Andy, Matthew, John and Martin taking part.</p>
Tom:	Brain Buzz time. We are going for brain buzz again today. So we need Em to get a bit of paper and a pen and come and sit down there and Emma will write down how clever you are and how hard you are making your brains work. What do we know after last Thursday? What do we know about our brains if we make them work, what do they do. Do you remember? We said the more you use it, because our brain is made up of brain cells and the more you use your brain what happens. Can anyone remember what happens? What happens to your brain the more you use it?	SF:	<p>Right everyone what are we looking for when we watch this lesson today?</p> <p>Learning Sue.</p> <p>That's right John. We're trying to spot learning. So every now and again I'll stop the DVD and we'll talk about what's going on. Is that ok? (pupils nod) Ok, here we go.</p> <p>(Video begins)</p>
John:	The more you become clever at doing it.	SF:	Is that right? The more you use your brain – the cleverer you get?
Tom:	That can be the case, but I am thinking about your brain cells. What happens to your brain cells and the connections between the brain cells? Can you remember that? You can't remember it. Can you	John:	Yes it is Sue Fisher.

	remember that you get more and more? The more you use your brain the more connections are made for you to make sense of things to help you learn and remember and the more brain cells you need. You are right in lots of ways John, the more you use your brain the clever your brain becomes, the more it can do. The more it can remember.		
John:	It's true and correct.		
Tom:	Yes it is correct. We are going to practice a skill that we have done before today. But then we are going to do something funny with it, we are going to make a connection. Remember what we said about brain cells and connections. We are going to make a connection that maybe you do not realise that you know. We are going to try that. So we are going to read the first I can statement John. Read it for me.		
John:	I can recall addition doubles up to 10 add 10.	SF:	Good reading John.
Tom:	That easy peasy.	John:	Easy peasy Sue.
John:	Lemon squeezy.		
Tom:	It is, I think I can even do it shuffled, jumbled up and you will be brilliant at it, because I think you know it very well and you can do it really fast. Shall we see if that is the case?		
John:	Just like that. (John clicks his fingers)		
Tom:	Like that, (clicks fingers). We are going to get a brain buzz on. Let's see who is going to get the quickest and the biggest brain buzz on, because I am going to start with Matt. 8 add 8?		
Matthew:	16		
Tom:	3 add 3?		
Matthew:	6		

<p>Tom: 6 add 6?</p> <p>Matthew: 12</p> <p>Tom: 7 add 7?</p> <p>Matthew: 14</p> <p>Tom: 1 add 1?</p> <p>Matthew: 2</p> <p>Tom: 4 add 4?</p> <p>Matthew: 8</p> <p>Tom: 6 add 6?</p> <p>Matthew: 12</p> <p>Tom: 10 add 10?</p> <p>Matthew: 20</p> <p>Tom: 2 add 2?</p> <p>Matthew: 4</p> <p>Tom: 5 add 5?</p> <p>Matthew: 10</p> <p>Tom: 8 add 8?</p> <p>Matthew: 16</p> <p>Tom: 3 add 3</p> <p>Matthew: 6</p> <p>Tom: I want you to turn that upside down and give me the answer.</p> <p>Matthew: 18</p> <p>Tom: Because I had two 6 add 6 didn't I? (To Carl) What is 9 add 9? (Pointing to Matthew) Listen to him.</p> <p>Carl: 18</p>		<p>SF:</p> <p>Matthew</p> <p>SF:</p> <p>Martin</p>	<p>(Video paused)</p> <p>What were you learning about this lesson?</p> <p>Doubles.</p> <p>Great, can everyone remember what you were learning about?</p>
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Tom:	You didn't need to listen to him, well remembered. Going to try you now then. Is it going to be rubbish or is it going to be really hard thinking so that your brain buzzes? 5 add 5?	SF: Martin: SF: Martin:	Yes and half, halving numbers too. Halving numbers? That's new. Yes but it's easy because it's like the opposite. The opposite? Yes like if you know like 3 add 3 then it's 6 so half of 6 is 3 because 3 add 3 was 6.
Carl:	10	SF:	because 3 add 3 was 6.
Tom:	8 add 8	Matthew:	Oh, I see. That's clever.
Carl:	16	Martin:	Watch it
Tom:	3 add 3		Turn it back on Sue. It's halving the numbers next. (Video resumes)
Carl:	6		
Tom:	9 add 9?.... 9 add 9 think. 8 add 8 was?		
Carl:	18		
Tom:	9 add 9 is 18. 7 add 7?		
Carl:	14		
Tom:	1 add 1?		
Carl:	2		
Tom:	4 add 4?		
Carl:	8		
Tom:	6 add 6?		
Carl:	12		
Tom:	10 add 10?		
Carl:	20		
Tom:	2 add 2?		

<p>Carl: 4</p> <p>Tom: 5 add 5?</p> <p>Carl: 10</p> <p>Tom: 8 add 8?</p> <p>Carl: 16</p> <p>Tom: 3 add 3?</p> <p>Carl: 6</p> <p>Tom: 9 add 9?</p> <p>Carl: 18</p> <p>Tom: 9 add 9?</p> <p>Carl: LR: 18</p> <p>Tom: 9 add 9</p> <p>Carl: 18</p> <p>Tom: Very good. 9 add 9</p> <p>Carl: 18</p> <p>Tom: Have you got a bit of brain buzz there? Can you feel your brain working really hard there Carlo? Can you feel your brain working? If you think of speed for your brain working are you 1) dead slow, 2) little bit faster, 3) fast, or is your brain working at 4) very, very fast?</p> <p>Carl: 2</p> <p>Tom: 2? Do you think we can boost it up a bit? We need to do something a bit harder. Will see if Andy can do this. 7 add 7?</p>		<p>SF: (Video paused)</p> <p>Carl: Only 2 Carl?</p> <p>SF: Yeah. (smiles)</p> <p>Carl: You looked like you were trying very hard to me.</p> <p>SF: Yes.</p> <p>Andy: Andy, are you going to be good at this?</p> <p>Yes. I will be doing it very well.</p>
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<p>           Carl: 20            Tom: 2 add 2?            Carl: 4            Tom: 8 add 8?            Carl: 16            Tom: 3 add 3?            Carl: 6            Tom: 9 add 9?            Carl: 18            Tom: 7 add 7, 7 add 7 is?            Carl: 14            Tom: 1 add 1?            Carl: 2            Tom: 7 add 7?            Carl: 14            Tom: 4 add 4?            Carl: 8            Tom: 6 add 6?            Carl: 12            Tom: 10 add 10?            Carl: 20            Tom: How's your brain?            Carl: Good.            Tom: Working 1, 2, 3 or 4? 1 - just strolling along, 2 - ok, 3 - it is working quite fast, 4 - it is working very fast?            Carl: 3.         </p>		<p>           SF:            John:            SF:            Martin:            John:         </p>	<p>           (Video paused)            How can you tell if someone is learning?            You can see they are trying hard.            How?            They are looking and listening.         </p>
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<p>Tom:</p> <p>Matthew:</p> <p>Tom:</p> <p>Carl:</p> <p>Tom:</p> <p>Carl:</p>	<p>3? Want you to look at the second 'I can' statement. This is the bit that Emma is going to write down what you can and can't do. Read this for me Matty please.</p> <p>I can work out half of even numbers up to 20.</p> <p>Brilliant reading, I think your brain has just got a little bit fast there. Brilliant reading.</p> <p>Some of those are pretty hard words. Anybody not understand some words in that? I can work out half of even numbers to 20? Do you understand all those words Carl?</p> <p>Half</p> <p>Half of...(underlines the words half of) we will do some further work on that. Any other words you do not understand? I can work out half of even numbers to 20.</p> <p>I can't understand it.</p>	<p>SF:</p> <p>John:</p> <p>SF:</p> <p>Martin:</p> <p>John:</p> <p>SF:</p> <p>Matthew:</p> <p>Carl:</p> <p>SF:</p> <p>Martin:</p> <p>John:</p> <p>SF:</p>	<p>They aren't being silly.</p> <p>Is it important to try hard?</p> <p>Yes.</p> <p>Why? Why should people try hard?</p> <p>'Cos people learn things if they try. You can't learn if you just sit there.</p> <p>Sit there like a plum pudding.</p> <p>Like a plum pudding? (laughter) Is that what Tom says?</p> <p>Yeah.</p> <p>Not be a plum pudding.</p> <p>So it's important to try hard and give things a go?</p> <p>Yes try hard and learn stuff. Use your brain.</p> <p>Use it or lose it.</p> <p>Great.</p> <p>(Video resumes)</p>
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Tom:	You can't understand it or you can?		
Carl:	I don't understand even.		
Tom:	Let's underline some of these words which are tricky. (to John) Do you know what even is?		
John:	I know even, 2 add 2 is 4. They are even, so it means half.		
Tom:	Your brain has gone three speed, you are in third gear. (to Carl) Did you hear what he said or do you want to ask him again?		
Carl:	Please can you say that again, John.		
John:	It is when you go up in twos.		
Tom:	It's when you go up in twos, from zero, 2, 4, 6, carry on Carl.		
Carl:	8, 10, 12, 14, 16, 18, 20		
Tom:	They are all even numbers. So we know what that means now. We have learned something today already.		
		SF:	(Video paused) I'm really impressed Carl. You asked for help with those words. John you were excellent at helping then. That was lovely to see. What did Tom say you had learned?
		John:	
		SF:	What an even number is. Yes what an even number is and Carl said some even numbers. That was excellent learning. What was the other thing Carl you didn't understand?
		Carl:	
		SF:	Dunno
		Carl:	Half of?
		SF:	Yeah, half.
		Carl:	Are you about to learn what half of means?
		SF:	Yeah.
		Carl:	Shall we see?

Tom:	<p>So we are going to work out half of 2, half 4, half 6, half 8, half of 10 half of 12, half of 14, 16, 18, 20. All we have to do now is understand the words half of. And we are going to use what we already know about additional doubles to get the right answers, because if you look at my fingers.</p> <p>(Tom holds up two hands and shows the class half the number on one hand the other half on the other add, bringing them together to add and taking them apart to half)</p> <p>Andy if you look at my fingers, 1 add 1 makes 2 and half of 2 is 1. There is a pattern, 1 add 1 is two, half of two is 1. As there is half over there and half over there which is the other one? How many have I got now? 2 add 2 is 4, half of 2?</p>		<p>Yeah.</p> <p>(Video resumes)</p>
John:	I didn't know you could do that.		
Tom:	I didn't know I could do that 'til about two seconds ago! (laughter) 3 add 3 is 6, half of 6 is 3. Can you see how addition doubles can tell you what half of a number is? You just do the opposite. What is this one Carl?		
Carl:	4 add 4.	SF:	What's Tom doing?
Tom:	And 4 add 4 is?	Martin.	Showing halves on his hands. His fingers.
Carl:	8		
Tom:	So half of 8 is?		
Carl:	4		
Tom:	(Holds up his hands to show 5 add 5)		
John:	5 and 5		
Tom:	Makes?		
John:	10		

Tom:	So half of 10 is?		
John:	5		
Tom:	5 in that half (waves hand) and 5 in that half (waves other hand). Let's do it together. I know it sounds a bit childish for you.		
Andy:	(looking straight at the camera) Why are there two cameras?		
Tom:	Let's talk about that in a minute. Let's see how fast we can do it. (uses hands throughout as before) So 1 add 1 is?		
All:	2		
Tom:	So half of 2 is?		
All:	1		
Tom:	2 add 2 is?		
All:	4		
Tom:	So half of 4 is?		
All:	2		
Tom:	3 add 3 is?		
All:	6		
Tom:	So half of 6 is?		
All:	3		
Tom:	4 add 4 is?		
All:	8		
Tom:	So half of 8 is?		
All:	4		
Tom:	5 add 5 is?		
All:	10		
Tom:	So half of 10 is?		
All:	5		
Tom:	Right. Brilliant. Where's me cards? There they are. What I am going to do, just to get you into the swing		



John:	Half of 8?		
Tom:	4		
John:	5 add 5?		
Tom:	10		
John:	Half of 10?		
Tom:	5		
John:	6 add 6?		
Tom:	12		
John:	Half of 12?		
Tom:	6		
John:	7 add 7?		
Tom:	14		
John:	Half of 14?		
Tom:	7		
John:	8 add 8?		
Tom:	16		
John:	Half of 16?		
Tom:	8		
John:	9 add 9?		
Tom:	18		
John:	Half of 18?		
Tom:	9		
John:	10 add 10?		
Tom:	20		
John:	Half of 20?		
Tom:	10		
John:	I want a go.		
Andy:	You would like that wouldn't you? How was your	SF:	
Tom:	brain working there? What speed?	Andy:	You wanted a go Andy? Yes Sue. I can do it.

## **APPENDIX 6**

### **Pupil Interview Questions**

- What do you think learning is?
- What do you think intelligence is?
- Do you think that '**You only have a certain amount of intelligence and you can't do very much to change it**'?
- Do you think that '**Your intelligence is something that you cannot change very much**'?
- Do you think that '**You can learn new things, but you can't change how intelligent you are**'?
- How intelligent do you think you are?
- Can you get more intelligent?
- What do you think you're good at?

Questions in **bold** adapted from the questions used in Dweck's research (1999).



## **APPENDIX 7**

### **Pupil Interview Responses ~ an example showing initial coding**

## Martin Interview 1 (M1)

SF:	1. Right Martin, I'd like you to tell me what you think learning is?
Martin:	2. Learning is what you do at school I think. Like in lessons and stuff. You learn things by listening to the teacher and by doing things.
SF:	3. Great. How do you know if you've learned something?
Martin:	4. Well you know if you get things right then you must've learned it. Like in maths, you get the sums right or you spell words right or something like that. You do work right and the teacher says you're right.
SF:	5. Right I see. So do you know what intelligence is?
Martin:	6. Yes. Intelligence is like how clever you are. If you're intelligent then you're really clever, really smart, really good at things, in lessons and stuff. You always get things right.
SF:	7. Thanks Martin, that was a really good way of telling me what you think intelligence is. I'm going to say something now and I want to know if you think what I am saying is right? 'You have a certain amount of intelligence and you can't do very much to change it.'
Martin:	8. I don't know really. An amount of intelligence? I don't know. I suppose so. Some people are clever and some people aren't clever, so I suppose so.
SF:	9. So what about this one: 'Your intelligence is something that you can't change very much.'
Martin:	10. I don't know really. You can't change it very much? No probably you can't. I suppose it depends if you can or not. What do you think Sue?
SF:	11. I don't think I should say what I think just now – I'm wanting to know what you think! (laughter) Good try though Martin, I'm not even sure there's a right answer – it's just about what people think.
Martin:	12. It sounds a bit funny but I don't think you can get any more intelligenter...can you? You can't get more

## Martin Interview 1 (M1)

	<b>intelligenter.</b> I don't think so anyway. But <b>I might be wrong</b> (laughter)
SF:	13. Ok Martin, last one, 'You can learn new things, but you can't change how intelligent you are.'?
Martin:	14. Well <b>you can learn new things.</b> I know that. <b>You learn new stuff at school</b> so you can learn new things. But how intelligent you are? How intelligent you are...?
SF:	15. Do you think you can change how intelligent you are?
Martin:	16. <b>I don't really know Sue.</b> <b>Maybe you can if you know lots of stuff</b> but <b>I don't know.</b> <b>Clever people know a lot don't they?</b>
SF:	17. That's fine Martin. I'm not sure there is a right answer. I just would like to know what you think.
Martin:	18. Well maybe <b>I'm too thick to know</b> about it! (laughter)
SF:	19. How intelligent do you think you are Martin?
Martin:	20. <b>Not very!</b> (laughter) Well <b>you</b> know Sue, you know that <b>I can't read very well.</b>
SF:	21. Does that mean you're not intelligent though Martin?
Martin:	22. Well I think <b>most people would think so.</b> I know things but <b>I don't think you'd be in a special school if you were very intelligent, so I can't be can I?</b>
SF:	23. What about (name of another pupil in school)?
Martin:	24. Yes but <b>he's got something else wrong with him.</b> But I suppose you're right. <b>I don't know Sue.</b>
SF:	25. Could you become more intelligent Martin?
Martin:	26. No. I don't think I could. <b>I have got better at reading and better at other stuff than before but I'm still not</b>

## Martin Interview 1 (M1)

	<p><b>very good. I'm not doing GCSEs or A levels like (name of other pupil) and other people would be if they were my age. Well not A levels. People wouldn't think I'm clever.</b></p>
SF:	27. How do you know?
Martin:	<p><b>28. I just do. People who don't know me very well don't think about what I <u>can</u> do. They don't know what I <u>can do</u> because they don't know me so they don't know.</b></p>
SF:	29. But why does that mean people wouldn't think you're clever?
Martin:	<p><b>30. Because <u>people make assumptions.</u></b></p>
SF:	31. Assumptions? That's a good word there Martin.
Martin:	<p><b>32. Yes thanks (laughter) they would say 'oh <u>he goes to a special school</u>', 'oh <u>he's in a wheelchair</u>', or 'oh <u>he can't read so he's not very clever</u>', '<u>his legs don't work</u>', '<u>he's got cerebral palsy</u>', '<u>he's disabled</u>'. Stuff like that.</b></p>
SF:	33. Does that bother you Martin? It sounds like maybe it does.
Martin:	<p><b>34. Not much because I don't know them and they don't know me.</b></p>
SF:	35. So you think people assume you're not clever? Why?
Martin:	<p><b>36. Because they don't know me but they <u>maybe think they do</u>. They look at me and they think they do. <u>They look at me and they think they know stuff about me.</u></b></p>
SF:	37. Is it like that all the time Martin?
Martin:	<p><b>38. No, not all the time. Only when people don't know me like <u>who I am inside</u> <u>not what I look like</u>.</b></p>
SF:	39. I see. But remember I asked you what you thought? How intelligent do you think you are?

## Martin Interview 1 (M1)

<b>Martin:</b>	<b>40.</b> Only a little bit clever probably. Not much but you know.
<b>SF:</b>	41. Why? Why do you think that?
<b>Martin:</b>	<b>42.</b> I don't know. But I think other people are cleverer than me. Not everybody (laughter) like Carl he's not clever. I don't think he can walk and breathe at the same time (laughter). No not really but I know I'm cleverer than some people. I'm just not clever – if you know what I mean?
<b>SF:</b>	43. Yes. I know what you mean. I think you're cleverer than you think by the way. What do you think you're good at Martin?
<b>Martin:</b>	<b>44.</b> Good at? Emm ... Nothing. Emm... well I don't think I'm good at anything in particular.
<b>SF:</b>	45. Nothing at all? Nothing? Not at home or at school.
<b>Martin:</b>	<b>46.</b> Well I make a good cup of tea! (laughter) I'm good at wheelchair football. I beat you didn't I?
<b>SF:</b>	47. Yes. You were scary!
<b>Martin:</b>	<b>48.</b> Yes but then I've had more practice! I'm not particularly good at much Sue. That was a bit of a silly question. Are you seeing if I get good at something later?
<b>SF:</b>	49. You know we're going to find out about how people learn and how people can get better at learning so maybe...
<b>Martin:</b>	<b>50.</b> Doubt it.
<b>SF:</b>	51. Well we'll see. Thanks Martin for chatting to me. Thanks for telling me what you think.
<b>Martin:</b>	<b>52.</b> That's ok Sue. I like a chat me.

## **APPENDIX 8**

### **Staff Interview Responses ~ an example**

## Tom Interview 2 (T2)

SF:	1. Hi Tom.
Tom:	<b>2. Yes, my love?</b>
SF:	3. What do you think learning is?
Tom:	<b>4. What do I think learning is? Learning is knowledge, skills and understanding, with the emphasis on understanding, so it is learning, skills and knowledge and using them in functional situations.</b>
SF:	5. Tom that was a text book answer. Have you been practising? (laughter) What do you think intelligence is?
Tom:	<b>6. Intelligence is that ability to generalise outcomes. To use what you know.</b>
SF:	7. Ok, is there anything else?
Tom:	<b>8. Emm, well it fluctuates. It is not a set ability. You can actually improve your intelligence, simply by improving your learning skills and strategies.</b>
SF:	9. Again, text book.
Tom:	<b>10. Thank you.</b>
SF:	11. Do you think what I am saying is right? You only have a certain amount of intelligence and you cannot do much to change it.
Tom:	<b>12. We have proven that time and time again, that's not right.</b>
SF:	13. Do you want to elaborate on that?
Tom:	<b>14. If that were the case, there would be no point in having schools like this would there? Why would we bother? Why wouldn't we just assume the worst and sit here basket weaving?</b>
SF:	15. Fantastic, I wonder what Ofsted would make of that? What about: Your intelligence is something about you that you cannot really change.
Tom:	<b>16. No. Again, you want me to elaborate don't you? Say it again.</b>
SF:	17. Your intelligence is something that you cannot really change very much.

## Tom Interview 2 (T2)

Tom:	<b>18. No, you can change it a great deal, depending on learning strategies, mindset etc. You see I've been listening! (laughter) You can edit out that bit if you like.</b>
SF:	19. Thanks Tom. 'You can learn new things, but you cannot change how intelligent you are.'
Tom:	<b>20. No again, learning new things means that you actually improve your intelligence. It does probably depend on what you believe intelligence is mind you. But to be honest it's much more useful to think of intelligence as something you can change.</b>
SF:	21. Why?
Tom:	<b>22. Well it's like we've been telling the kids it's better to believe you can get better at learning and become more intelligent by trying hard and working hard than by them thinking they're thick or stupid and they can't do anything to change it. It's like there's no hope, so why bother? I don't think that's very helpful when it comes learning and being at school.</b>
SF:	23. Ah Tom, that was just unbelievably fantastic. Do you think this work has made any difference to the kids in your class? I know we've chatted a lot over the weeks but could you maybe just sum up what you've noticed?
Tom:	<b>24. Well I think the biggest difference is that they've all become far better at noticing learning – what they've learned rather than what they've done. Before if you said what have you learned today they'd probably have told you what they did in a lesson, like an experiment in science, but couldn't really pinpoint what they learned by doing it. Now they're much more aware of what they learn in a lesson and because of that they are better at assessing their own progress which I think is great. I also think some kids are more confident now too. Instead of maybe feeling a bit helpless or hopeless or hapless (laughter) I think it's been empowering for them. Liberating even.</b>
SF:	25. Wow – that's big! How do you know?
Tom:	<b>26. Well the kind of things they say now. It's like things are possible – you know? Like they're less stuck, "fixed" (<i>air quotes</i>) by their disabilities – notice how I used the right word there Sue (laughter). If they work hard and try hard they can make progress and get better at things. It's</b>



## Tom Interview 2 (T2)

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	<b>motivating I think. Not everybody though. I think it's not affected Carl very much. But I'm not certain that much could.</b>
SF:	27. So Carl is "fixed" ( <i>air quotes</i> ) then?
Tom:	<b>28. (laughter) Yes – I see you got me there! No he's not I'm sure but maybe he needs more help to see his own potential!</b>
SF:	29. Thanks so much for helping with this. I'm glad it seems to have made a difference to some people at least.
Tom:	<b>30. Yes definitely there's something in it. It seemed such a simple idea when we did that training. Not really rocket science. But actually it could make a big difference in how these kids see themselves and how prepared they are to work. To try. Many kids come here with a huge fear of failure which just gets in the way of them trying. But I don't know if these ideas will last.</b>
SF:	31. No, I don't know. It may be something that we need to keep coming back to so it doesn't get lost.
Tom:	<b>32. Well that's not that hard to do.</b>
SF:	33. No. Thanks Tom. Thanks for putting so much effort into this. I'm glad you think it was worth it.
Tom:	<b>34. Definitely. Thanks Sue.</b>

## **APPENDIX 9**

### **Themes ~ Learning**

Dominant Themes: Learning	Carl	Andy	Martin	Matthew	John
<i>You either know it or you don't</i>		You might know something or not know something	You either know it or you don't		
<i>Learning happens at school</i>	at school  learning lessons	do things at school  in the lessons	learning is what you do at school  in lessons  you learn new stuff at school	yes ( <i>at school</i> )	at school  work in lessons like maths and science.
<i>Learning under direction of an 'expert'</i>		teachers want you to learn things	you learn things by listening to the teacher		
<i>Learning by doing work</i>		you learn things and you do things  you do work and know it	by doing things	work  easy or hard	what you do with work  something that you do with work
<i>Learning is evident</i>		you can say it or do it	if you get things right then you must've learned it	can do it  say it do it get thing right	
<i>Learning happens inside your head</i>		in your head  you know it in your head		Know things ( <i>points to head</i> )	
<i>Learning is possible</i>	yeah  yes	You can certainly learn new things	you can learn new things	yeah	

		know you can definitely learn things	<b>you are learning new stuff all the time</b>		
<i>Learning is a positive thing</i>	is good				
<i>Learning is incremental</i>			<p>you know more and more stuff</p> <p>you can use the new stuff to do work or to know more things</p> <p>(things) connect and you... know things</p> <p>New things in your head</p> <p>New stuff that you know</p>		
<i>Mistakes are part of learning</i>		Yes I suppose so			
<i>Learning is useful for the future</i>		Trying to make you clever for the future	Learning is so that you can get a better job		about getting a job maybe
<i>Learning is remembering something</i>		You can remember it	You remember it		

Responses in **bold** were made in the second interview

## **APPENDIX 10**

**Themes ~ Intelligence**

Dominant themes: Intelligence	Carl	Andy	Martin	Matthew	John
<i>Intelligence is innate</i>		you can't get more clever from somewhere	some people are clever, some people aren't clever		you are right ( <i>have a certain amount of intelligence</i> )
<i>Intelligence is fixed</i>	some people can't ( <i>change it</i> )	( <i>they can't change it?</i> ) I think so ( <i>meaning no</i> )  ( <i>can you change it?</i> ) I think not	you can't ( <i>change it</i> )  I don't think you can get any more intelligenter  you can't get more intelligenter	yes	( <i>You can't change it? Is that right?</i> ) I think so
<i>Intelligence is limited by 'difficulties'</i>		if you've got a learning difficulty then probably no  people with learning difficulties can't get more cleverer  <b>you mean people with problems? ... it depends if they want to</b>	I don't think you'd be in a special school if you were very intelligent		
<i>Intelligence is the same as being clever</i>		it's being a clever person  intelligence and clever is the same	intelligence is how clever you are  intelligent ( <i>people are</i> ) really, really clever, really smart  <b>(being) really, really, really clever</b>		

<i>Intelligence is evident (it can be demonstrated)</i>			<p><i>(Intelligent people are)</i> really good at things</p> <p>you always get things right</p> <p><b>When you do something and you can do it, you feel clever</b></p> <p><b><i>(doing it right)</i> can make you feel like you're intelligent</b></p>		<p>intelligence is to do with work</p> <p><b>getting better at something</b></p>
<i>Intelligent people know a lot</i>		clever people know lots of things	<p>clever people know a lot</p> <p><b>you know lots and lots and lots of stuff</b></p>		
<i>Intelligence can change</i>	<p>change it</p> <p><b>Some people can change it</b></p>	<p><b>if you work hard, I think you will change</b></p> <p><b>you can work harder to become more intelligenter</b></p> <p><b>you can get intelligenter</b></p> <p><b>anyone can get more intelligenter</b></p> <p><b>you have to try to</b></p> <p><b>if you learn new maths, your maths is intelligenter</b></p>	<p>maybe you can (<i>get more intelligent</i>) if you know lots of stuff</p> <p><b>I think if you learn more stuff, you get more intelligent</b></p> <p><b>the more you know, the cleverer you are</b></p> <p><b>You can get more intelligent by learning stuff ... so you can change it</b></p>	<p><b>can change it</b></p> <p><b>yeah</b></p> <p><b><i>(if you)</i> learn stuff</b></p>	<b>by doing work</b>

		<p>if you learn more words and then your spelling is intelligent</p> <p>so you can learn things and get more intelligenter</p>			
<i>Intelligence is brain based</i>		<p>trying to make your brain clever</p> <p>you learn new stuff and your brain is more intelligenter</p>	<p>in your brain, in your head</p> <p>your brain makes connections</p> <p><i>(your brain)</i> makes new paths</p>		
<i>Intelligence enables thought</i>		<p>you can think stuff very quickly; very complicated stuff very quickly.</p>	<p>you can use the new stuff to do work or to know more things</p> <p>It's what you do with what you know</p>		

Responses in **bold** were made in the second interview



## **APPENDIX 11**

### **Themes ~ Self-beliefs**

Dominant themes Self-beliefs	Carl	Andy	Martin	Matthew	John
<b>Feedback from others (actual or assumed)</b>		<p>Someone told me that (<i>I'm not clever</i>)</p> <p>A lady told me "something not quite right" (taps forehead)</p> <p>She said 'autistic'</p>	<p>Most people would think so (<i>that he's not intelligent</i>)</p> <p>People wouldn't think I'm clever</p> <p>People who don't know me very well don't think about what I <u>can</u> do. They don't know what I can do</p> <p>(<i>People would say</i>) he goes to a special school', 'oh he's in a wheelchair', or 'oh he can't read so he's not very clever', 'his legs don't work', 'he's got cerebral palsy', 'he's disabled'</p> <p>They look at me and they think they know stuff about me.</p>		
<b>Feedback about others</b>		<p>People with learning difficulties aren't clever</p>	<p>He's got something else wrong with him</p> <p>People make assumptions</p> <p>Carl he's not clever. I don't think he can walk and breathe at the same time!</p>		

<b>Difficulties</b>		<p>I had problems</p> <p>Problems with reading and social communications</p> <p>(problems) concentrating and listening and something else as well</p> <p>(autistic) means something is wrong</p>	<p>I can't read very well</p> <p>I don't think you'd be in a special school if you were very intelligent, so I can't be can I?</p> <p><i>(People assume things because of) what I look like</i></p>		
<b>Being Clever</b> <i>(Self-beliefs: ability)</i>		<p>I am not clever</p> <p><b>I'm very intelligent I think</b></p>	<p>Not very!</p> <p>I'm too thick to know</p> <p>A little bit clever probably. Not much</p> <p>I think other people are cleverer than me</p> <p>I know I'm cleverer than some people.</p> <p>I'm just not clever</p> <p><b>Sometimes I'm ok</b></p> <p><b>Sometimes I think I'm a bit stupid</b></p> <p><b>I'm not very intelligent I don't think but I'm ok.</b></p> <p><b>Maybe sometimes I'm clever, sometimes I'm</b></p>	<b>(I'm) ok</b>	<p>I think I'm a bit clever</p> <p><b>I'm quite intelligent</b></p> <p><b>I think I'm very intelligent</b></p>

			not.  I'm more intelligent than some people though		
<i>Own intelligence beliefs - fixed</i>		How can I get cleverer?	No I don't think I could ( <i>get more intelligent</i> )		<b>No. I'm intelligent now!</b>
<i>Own intelligence beliefs - incremental</i>		<b>I'm trying to get even more intelligenter</b>  <b>My brain can get bigger if I try to learn</b>			I think maybe I could ( <i>get more intelligent</i> )
<i>Failure beliefs</i>		I don't like getting things wrong  <b>It's better not to make any mistakes</b>  I think it's better just to try to get it right the first time	(more confident about) 'having a go'  ( <i>not so worried</i> ) 'about getting it right'.  ( <i>do mistakes matter?</i> ) No just make a different mistake. If you don't make mistakes sometimes you probably aren't learning much.		
<i>Effort beliefs</i>		<b>I work my hardest at school</b>	I think that I'm good at having a go and trying.  I try hard.		<b>Like trying my bestest to work hard and try hard</b>

Responses in **bold** were made in the second interview

## **APPENDIX 12**

### **Information and consent letter to parents/carers**

Dear Parent/Carer,

I am in the process of completing a course at university. Part of this course involves completing an extended piece of research. I would like to involve your child in this research and ask that you read the following information carefully and, if you agree to your child taking part, please sign the letter and return this to me at school.

**Project Title:**

Does self-theories research apply to pupils with speech, language and communication difficulties?

I agree that my child (*full name of pupil*), for whom I am a parent/guardian, may take part in this Newcastle University research project. I understand that the project will be explained to my child and I have read the Information Sheet, which I may keep for my records.

I understand that agreeing to take part means that I am willing to allow my child to:

- Speak with Sue Fisher in two interviews;
- Take part in three videoed lessons;
- Take part in six special lesson designed to help them better understand learning;
- Complete a daily diary of their learning each day for six weeks.

**Data Protection**

I understand that any information is confidential and that no information that could lead to the identification of any individual will be disclosed. No identifiable personal data will be published. All information will be anonymised prior to its inclusion in the finished thesis.

I agree that \_\_\_\_\_ may take part in this study. I understand that I can change my mind at any time and if I have any questions I can contact Sue Fisher at school or by email.

Signatures.....

Date.....

## **APPENDIX 13**

### **Pupil Information Sheet**



## **Pupil Information Sheet**

As part of my course at university I have to do some research.

I would like you to take part in this research.

The title of my research is -

**Does self-theories research apply to pupils with speech, language and communication difficulties?**

If you want to, you will take part in:

- 2 interviews;
- 3 videoed lessons;
- 6 special lessons, with Tom, to learn about your brain, learning, intelligence and what self-theories research is about;
- Writing in a diary about what you learned at school each day.

**You do not have to take part.**

**You can change your mind and stop taking part later on if you want to.**

When I write about the research, I will not tell people your name or the name of our school.

You can ask questions if you want to.

Your parents and school staff know about the research and you can talk to them about it too.

Thank you

Sue

## **APPENDIX 14**

### **Staff Consent Form**

## **Informed Consent Form - Staff**

I understand that my participation in this project will involve:

- attending two training sessions within directed time as part of my CPD;
- participating in two semi-structured interviews;
- participating in video recording 3 lessons;
- involvement in planning and delivering six sessions based on the 'Brainology' website.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason.

I understand that I am free to ask any questions at any time. I am free to withdraw or discuss my concerns with Professor Liz Todd.

I understand that the information provided by me will be held confidentially, such that only the researcher can trace this information back to me individually. I understand that my data will be anonymised within the study and that after this point no-one will be able to trace my information back to me. The information will be retained for up to two years when it will be deleted/destroyed. I understand that I can ask for the information I provide to be deleted/destroyed at any time up until the data has been anonymised and I can have access to the information up until the data has been anonymised.

I also understand that at the end of the study I will be provided with additional information and feedback about the study.

I, \_\_\_\_\_(name) consent to participate in this study conducted by Susan Fisher, D.Ed.Psy. candidate, Newcastle University under the supervision of Professor Liz Todd.

Signed:

Date: